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	Page
Medical Education of the Public L. FARRER-BROWN, J.P.	103
A Chapter of Accidents—Part 3 ERIC C. DOWNER, M.A., D.P.H.	110
Medication in a General Practice R. J. F. H. PINSENT, M.A., M.D.	115
Milestones in Medicine—19 E. ASHWORTH UNDERWOOD, M.A., B.SC., M.D., D.P.H., F.L.S. ..	123
Biology with Seniors in a Secondary Modern School—Part 2 FRANK TYRER, M.A., B.SC.	125
Lactation and Education: Two Related Failures ANNE BURGESS, M.B., CH.B., L.D.S., JOHN BURTON, B.A., M.R.C.S., L.R.C.P., D.P.H., and PRISCILLA MILTON	131
Nutrition Commentary	143

THE CENTRAL COUNCIL FOR HEALTH EDUCATION

THE CENTRAL COUNCIL FOR HEALTH EDUCATION

Tavistock House, Tavistock Square, London, W.C.1

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THE

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A QUARTERLY FOR ALL WHO ARE INTERESTED IN HEALTH

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EDITORIAL

Two great assemblies have gathered during the last three months, one national and the other international. At the Royal Sanitary Institute Congress the President, Lord Moran, paid fulsome tribute to the need for health education of the public and was backed up by numerous voices in all sections. At Geneva the Fifth World Health Assembly, which we had the honour to attend, underlined in numerous ways its awareness that health education is an essential element in any programme for the promotion of health and prevention of disease. In fact, no branch of preventive medicine received more mention.

Why is it, then, that with one or two notable exceptions it must be admitted that health education has not yet achieved the same status as other branches of preventive medicine? Why is it not yet properly integrated into the practice of public health? The reasons are complex and grounded deeply in the tradition of medicine and welfare work. Perhaps the most important aspect has been illustrated by the structure of the National Health Service hierarchy and the recent salary negotiations for medical officers of health. Medical status is still in ratio to its proximity to a hospital clinic. In such a scheme of values health education will naturally appear as the most remote and humble activity of medicine, in somewhat the same position as psychiatry 25 years ago.

Though most medical practitioners call themselves doctor, few would accord any importance to its ancient meaning of teacher. The therapist, the diagnostician, the researcher, the analyst, the surgeon are all roles in which the medical practitioner is at home and honoured. In the role of teacher of his patients it is fair to say that the doctor has almost reversed his part and drawn a magic circle between himself and the outside world. Secrecy has had two effects. In the minds of the profession the imparting of medical ideas to laymen had come to be regarded as an adventure perilous in the extreme, and if not reprehensible at least unnecessary and unethical. Though this is breaking down to some extent now, the atmosphere of "not to be handled by the patient" is still strong.

But, as Mr. Farrer-Brown points out in his article in this number, however silent the medical profession may remain, ordinary people will continue to have ideas on sickness and health, and because of this men and women otherwise well informed and intelligent live with the most bizarre notions and startling ignorance on a subject which affects them more nearly than any other and eagerly turn for enlightenment to advertisements and soothsayers.

The tradition of charity from which welfare has grown is another reason. Charity tends to do things for people rather than help people to help themselves. Doing things for people also lends itself better to streamlined admin-

istration, is more easily budgeted for, and the results are more familiar. For the social worker doing things for people is much easier and carries an obvious tribute and personal satisfaction. Education can never hope for this easier satisfaction and will never appeal to the short sighted. Changing people's ideas and behaviour is slow, undramatic, never-ending, and the results over short periods are hard to evaluate. But health education has no reason for existence if it is not that of helping people to help themselves.

Health educationists are by no means free from blame on both these counts. Through adopting too didactic an approach to education and not curbing sufficiently the very natural desire to run other people's lives for them, they have often been disappointed at the resistance their efforts produced. With the severe lack of trained or experienced personnel in this field of public health, such mistakes are understandable: the didactic approach, whether it be exhorting through posters or instructing by lectures, is easier and less time-consuming than the patient sorting of ideas in discussion. These are, however, only symptoms of a much more serious deficiency in the profession of health education, which is the absence of professional standards. Without training, qualification and accepted professional ethics, the health educationist will always be at a grave disadvantage. It is from this point that any attempt to raise the status of health education must start. With the growing interest and experience of doctors, health visitors, teachers and sanitary inspectors in this field, and a growing realisation of its powerful potentialities for good and evil, a great change is ripe to take place. Progress is delayed by a reluctance to clarify the area with which health education deals, its aims, content and method. A moment's consideration of the range of social medicine and education will make it quite obvious that the existing training of doctors and nurses, which may include a few lectures on education, and the training of teachers, which includes a few talks on health, are quite inadequate to produce from either profession people qualified to undertake the many considerable responsibilities of health education with judgment and skill.

As in any profession carrying a heavy load of responsibility for the thoughts and actions of laymen, the personal integrity of the man and the evidence that he has studied and become technically proficient in his subject is the only protection the public has against imposture. And until the public has this form of guarantee it will not give its confidence.

It is, then, our own house first and foremost which must be put in order by the definition of our area of work, our aims, methods and achievements, but most of all by offering a professional qualification to workers in this expanding field.

It is, therefore, with great satisfaction that we note the decision of the Fifth World Health Assembly to set up an Expert Committee to consider health Education of the Public during 1953. This committee will follow in a tradition of the highest quality and should be able to deal with these fundamental questions with wisdom and authority.

MEDICAL EDUCATION OF THE PUBLIC*

By L. FARRER-BROWN, J.P., *Barrister at Law. Secretary, The Nuffield Foundation.*

I AM DISCUSSING this subject as a layman with the proverbially dangerous amount of knowledge about man's health and sickness. If I should err or be indiscreet I am sure that you will be charitable—giving due allowance for the fact that in medical matters I am largely self-taught and have not had the advantage of a systematic course of training.

Implicit in what I wish to say are the following four main contentions:

1. That the public is entitled to education on matters of health and sickness;
2. That the experience so far gained favours, on balance, the continuation—and indeed every possible extension—of the endeavours which have been and which are being made to give the public this education;
3. That although some, perhaps many, of the educational tasks may be performed by other than medically qualified persons, the members of the medical profession have a vocational duty to the public—and to themselves—to take the medical education of the public seriously, and to use their best endeavours (by suitably equipping themselves, by hard thought and by whole-hearted effort) to see that if the public do not make use of mankind's stock of medical knowledge, it is the public's and not the profession's fault;
4. That, in content and conduct, the medical education of the public can and should be improved.

I do not propose to deal specifically with each of these contentions in turn. I have stated them at the outset because they will run through the theme of my remarks.

The knowledge available to mankind about health and disease cannot—at least in the Western world at the present time—be regarded as a private library behind locked doors, the key to which is chained to the belt of the medical profession. On the contrary, whether we like it or not—whether it is unfortunate or not—this knowledge is on open shelves to which all who choose have access.

*An address to the Royal Society of Medicine, November 27th, 1951.

The Health Knowledge of Laymen

Almost everyone, whatever his standards of intelligence and education, has an assortment of ideas on health and sickness. Often, perhaps usually, there is much confusion and many omissions. The common picture may be a collection of unrelated bits and pieces, gathered at odd times and in odd ways, some good and sound, others of little value, useless and even dangerous, because unrelated or incomplete or wrong. The collection may be, in part, the outcome of good teaching, in part the product of traditions (uncritically accepted), superstitions, prejudices, scraps of information read or heard at some time, instructions given by a doctor on the occasion of a particular illness, experience within the family or circle of friends, gossip, fears, grandmothers' tales: and, let us not forget the words of Richard Steele, "The first rudiments of education are given *very indiscreetly* by most parents."

In the Spring of 1950 a small survey was made in three London Boroughs to investigate the opinions of the public on various aspects of tuberculosis —for example, what knowledge they had of its incidence, how serious a problem they thought it, whether they could tell how to recognise it and what misapprehensions they might hold about it. The enquiry formed part of a more general investigation primarily concerned with some technical statistical aspects of the sampling of human populations. The sample was small (between 400 and 500 people) and in mentioning some of the findings as illustrations I have no thought of generalising from them. Of this small random selection, as one would expect, tuberculosis and cancer were the two diseases most in people's minds. A large proportion thought that tuberculosis was the largest single cause of death, but, by contrast, there was not a widespread acquaintance with the more common symptoms—about one-third confessed that they could not specify any symptoms at all. About one-third had no idea about the causes of the disease. Many were prepared to agree that bad housing, malnutrition and lack of rest might be involved. Over one-half thought the disease hereditary and another 20 per cent thought it ran in families without being inherited. *Something like one-third thought it was not catching.* Most thought it was preventable and at least partly curable. As to methods of treatment there was a fairly widespread belief in rest, good food and fresh air, combined (in the view of about 25 per cent) with some form of medical or hospital treatment.

The personal assortment of ideas which this example illustrates must influence in varying degrees, sometimes determine, man's actions in health and sickness. And these ideas would still exist and have their effects even if—an impossible if—the public were denied all access to medical literature and the medical profession explained nothing to the public, even when dealing with individual patients.

Man cannot, even though at times he may wish he could, ignore completely his body or his mind, and whether with understanding or not he develops ideas about them and their workings.

Should People Know More ?

I have dwelt on this point because to me it gives the best starting point for a discussion on the question of whether the public should be educated on medical matters. The question is seen to be not a choice between giving the public the chance of acquiring some accurate medical knowledge or keeping the public in the questionable bliss of complete ignorance. Instead, the question is what usefully can be done systematically to improve the assortment of ideas on health matters in the minds of the public. I say "systematically" because, while the haphazard, unplanned or unintended dissemination of information, if it is sound, may not be without some benefits, I think that in attempting to reach conclusions about the medical education of the public it would be better to concern ourselves with the giving of instruction or teaching in some degree in a systematic way with some definable object in view.

And here I should like to mention a point concerning the relations between an individual doctor and one of his patients whom he knows or suspects to have a particular disease. Subjective considerations must rightly have a determining influence on the doctor's anxious decision about what to tell and what not to tell his patient. He must decide from his knowledge of the patient whether to explain fully or to say little or nothing. While recognising the danger of generalisations on such a matter, I share the view held by most of my lay friends that doctors in such circumstances err on the side of saying too little—much too little—rather than too much. Unintentionally no doubt, the impression is sometimes created that we are nincompoops and should be content to have blind faith in the doctor. But, be that as it may, I accept that responsibility must rest with the doctor and that, on occasion, it may be a heavy one. Clearly it is a very different thing to tell a particular man or woman "you have cancer" from telling the public objectively, as a group, what is known about cancer. The medical education of the public can and should be conducted more objectively and the special considerations that apply to a doctor who has to tell a particular patient his fate should not, I submit, become limiting factors in the education of the public on medical matters.

It cannot be argued that mankind's stock of medical knowledge is still so limited that there is nothing to teach: but I have read the assertion by medically qualified men, that the public is incapable of being educated on matters of health and sickness. Admittedly some sections of the community are of limited mental ability, but it is equally true that the

number of people with powers of thought and comprehension in no way inferior to those of the medically qualified is very much larger than the total membership of that profession. And we must not overlook the healthy shrewdness possessed by many who lack much in the way of formal general education.

What Should be Taught ?

When we think of "the public" we must clearly recognise that the public is composed of various groups with differing degrees of mental ability, of education and of educability. Decisions reached about the medical education of the public, whether generally or on specific subjects, should, I submit, contemplate variations both in the subjects taught and in the standard of instruction according to the receptivity and powers of comprehension of the groups. I think I have detected a tendency to reduce the content and standard of medical teaching of the public to an assumed low level of the lowest common denominator. I enter a protest against any such mistaken course. The fear that certain sections might not understand is not a good reason alone for withholding teaching from other sections.

Likewise I would submit that the fear that public instruction on some topic might in some way harm certain individuals (e.g., by stimulating neuroses or creating groundless apprehension) is not of itself a sufficient reason to deny other members of the public knowledge by which it is reasonable to think they might benefit. Indeed, sometimes to know more is to fear less, and there seem good grounds for thinking that the spreading abroad of information about some diseases might do much to reduce fear and anxieties. I think poliomyelitis is a case in point. As a parent who has suffered the anxieties which I am sure affect a host of parents, I have welcomed the making known of the experience gained so far from epidemics of poliomyelitis in this country. The knowledge that in the last epidemic a large proportion of cases admitted to hospital suspected of having poliomyelitis suffered no paralytic effects or such a slight degree of paralysis as to pass unnoticed (65-70 out of every 100 cases admitted to hospital) and that another 17 per cent have a degree of residual paralysis which, if properly treated, is not likely to interfere with their ordinary life, has been a reassurance to me and has helped me to get the problem into better perspective and to keep anxieties within bounds.

Thinking broadly of the whole scope of medical education of the public I have little doubt but that there are dangers associated with it. The education of the public in medical matters is not, however, unique in this respect. All forms of education have some dangers associated with them, and I have yet to be convinced that the medical education of the public differs from all other forms of education in that its associated

dangers are not on balance less than the dangers of no education. In the matter of education an undue paternalism, at least for the adult population, is to be deprecated.

Having thoughts in mind about what I believe happened in this country during the last war, I am inclined to think that there is a tendency for all of us in our expert capacities and in regard to our own specialist knowledge to underestimate (1) the capacity of lay people to comprehend our specialist knowledge; and (2) people's ability to absorb—and in time to thrive upon —hard and painful truths if they are honestly presented. If the public have knowledge, within their capacity, of the human body and its workings and also of the difficulties in the way of those striving to gain yet more knowledge for humanity, they will, I believe, the more readily adjust themselves to painful facts. Trust the public and tell the truth seems to me a good working rule.

It is not my intention, however, to ignore the limitations of education. Changes in men's habits by education are achieved slowly, with difficulty and often with many disappointments. These limitations, I submit, are due less to man's limited powers of comprehension than to his at times irrational loyalty to his established habits of living, sometimes to weakness of will-power and not infrequently to the fact that he cannot be bothered. We cannot expect quick results from education—our eyes usually have to look a generation or two ahead for substantial results, but we know from experience that we can expect results. Think for a moment of the remarkable achievements of the child welfare movement in this country during the first half of the present century. In 1900 an infant mortality rate of 150 per 1,000 live births; in 1950 a rate of 29.8 per 1,000 live births. These figures, startling though they are, give an inadequate summary of the improvements effected in child life and care. What has been achieved falls short of what ought to have been achieved in the light of mankind's knowledge but they constitute a large credit for public education, and the means by which they have been achieved provide lessons and guides for those concerned with the enlightenment of the public on medical questions.

Who Should be Taught ?

There will be no argument that it is the children and young people who should be our first and main concern—the children at home, in the nurseries and schools; university and other students; young men and women in the Services and young people in industry. A start has been made to give them training which their parents as a rule did not receive. I was interested to find from a little scrutiny of the staff of the Nuffield Foundation that all but one of those aged twenty or less had had some tuition at school in hygiene or biology and most of those in the group

twenty-one to thirty had also received some instruction. The percentage declined markedly in the older age groups.

Day nurseries and elementary schools are trying to establish habits of personal hygiene conducive to a healthier life. In some secondary schools further teaching in hygiene and elementary biology is provided, including some simple sex education. So far as I know not much is done in universities. A little, inadequately, is done in the Services; scarcely anything, I believe, is done for the young worker in industry. But a start has been made. I feel that it is a start on the right road and that progress along that road should be pressed energetically.

The university health services and the industrial health services will, I hope, seize yet more strongly their chances to improve the knowledge and understanding of those who come under their influence.

I cannot understand why education in medical matters—or as I prefer to think of it in this connection, education in human biology—should be regarded as something apart from ordinary education—and not only apart but something very tender that must be handled with the utmost care. If one of the main objects of education is to fit individuals to cope with life a little better than they might otherwise do, surely education in human biology, suitably graded to age and intelligence, should be treated as a fruitful part of the main body of general education.

But what about the adult population? Obviously there are some sections of special importance because of their influence for good or ill on the young. Young parents, and especially expectant and nursing mothers, together with educationists head the list. Because of the strong desire displayed by their worshippers to imitate them in every possible way, should we not add film stars to this list?

It is not, however, solely as agents that adults should receive instruction. They are entitled to receive it for their own advantage. In the case of most of the present adult population we have to work on poor foundations. I presume that their main interest centres on diseases, their cure, alleviation and prevention, and that it is by sound teaching about diseases that in time a more enlightened attitude on health may be sought.

While the dividends will be much smaller than from the training of the young, dividends are to be expected from attempts to secure a better informed and understanding adult public opinion.

About many diseases there will be little or nothing to say because no one yet has found the answers. It would be out of place for me to attempt to go through a list, but may I urge that a special effort of public education should be directed against two afflictions—tuberculosis and obesity? Has not the time arrived when an all-out attack should be made on the public mind and conscience about tuberculosis? I know that it is an insidious and subtle disease, but I was encouraged to read the other day

these words of the Medical Officer of Health for Birmingham in his report for 1950—"with further sustained efforts over the next ten years I believe the eradication of tuberculosis, or at least its being brought to the level of unimportance, is within sight". For this to happen public opinion will have to be roused by education. I have been told by an expert on this disease that there is a considerable reluctance on the part of the public to be regularly examined and that the interest in mass radiography is waning, particularly among the adolescents, and further that the segregation of infectious individuals is hampered not only by a shortage of beds but by an unwillingness to accept any compulsion. Leaving aside any controversy that there may be about BCG, is it really too much to hope that public opinion in this country can be brought to the level of that of, say, Norway, a very democratic country, which has at least acquiesced in the making compulsory by law of notification by doctors of every case of tuberculosis coming to their knowledge, and also of the segregation of infectious individuals? Moreover, there seems to be a favourable public opinion towards other measures to defeat the disease. And we know what results are being obtained there.

I take it as agreed that the corpulent run many potential health dangers on account of their obesity—a pre-disposition to certain pathological conditions (high blood-pressure, arterio sclerosis, diabetes), to mechanical defects such as flat feet and hernia, that they are a greater surgical risk, that they more easily get in the way of motorists, that they are more prone to domestic and industrial accidents. I do not know the actual number running these unnecessary dangers, with the consequent reduction in their expectation of life, but I imagine that it must be very large.

The experience of one clinic where a large number of such cases are treated has been that the stupid persons who will not obey instructions—saying, for instance, "My mother was fat and I've always been fat" constitute a small minority. Something has been said from time to time about this condition, but the knowledge particularly about what can be done has not, I feel, been hammered home with the full force of the powerful authority of the medical profession.

Professor Whitehead in his book *The Aims of Education* says "Education is discipline for the adventure of life". May we hope that in the years to come all who have it in their power to do so will assist in seeing that through education the adventurers are as healthy as possible.

A CHAPTER OF ACCIDENTS

Part 3. Remedies

By ERIC C. DOWNER, M.A., D.P.H., *Medical Officer of Health, County Borough of Middlesbrough.*

IT will never be possible, and perhaps it is not desirable, completely to abolish accidents. Children will always, one hopes, climb trees, run about and play, and occasionally stumble. Errors of judgment can never quite be eliminated. The distraction of attention by some unexpected sound, sight or event, is bound occasionally to occur. To forget, as well as to err, is human.

One can, however, take steps to ensure that there is, as far as possible, a strong mathematical probability against any definite accident. To allow accidents to happen repeatedly from the same cause, and to take no steps to eliminate or reduce that cause, is simply to fail to learn a lesson. One can always attract the attention of the potential victims of accident to likely or possible causes, and one can do so without producing a mass anxiety neurosis in which people will be afraid to do anything for fear they might do it wrong and accident might accrue. We should be foolish, indeed, if we stood idly by and allowed great loss of working time, great expense in sickness and invalidism due to accident, and much unhappiness and irritation to continue, without doing all that we could to relieve it.

It is obviously a matter not only for individual prudence, but for public or communal action by interested bodies and responsible authorities.

There are now appended a few suggestions about what can be done.

A campaign should be conducted against accidents; or, to be more exact, an initial campaign to awaken public interest and then steady propaganda with a view to seeing that that interest is maintained and not permitted to die away.

An *Accident Prevention Committee* should be set up, with representatives of Police, Motorists, Cyclists, Pedestrians, Education, Parents, Health Workers, Sanitary Staff, Fire Service, First Aid Organisations, Local Doctors, Hospitals, Employers of Local Industries, and Trade

Unions. Sub-committees should be appointed for Road Traffic accidents, Works accidents, Home accidents.

Accurate Ascertainment of the accidents occurring within the area is important. There should be monthly reports by Police, Hospitals, Ambulance, Fire Service. But these are not sufficient in themselves; one must endeavour to interest members of the public in reporting for the information of the Committee accidents occurring in the privacy of homes, including those which do not necessitate hospital treatment. An approach should be made to private practitioners with a view to getting statistics of accidents treated in doctors' surgeries, which may prove in their way just as revealing as the more serious ones which are taken to hospital. The information thus received should be the subject of a monthly report from which seasonal and other variations can be carefully noted.

Patient Analysis of Causes may easily take a long time, but it is extremely rewarding, because the causes of accidents will be found to be very diverse. They may sort themselves into those which appear easily preventable, those where prevention might be ensured by carefully thought out precautions or education, and those which do not seem preventable at all and must be accepted as part of the hazards and vicissitudes of life.

In actual fact, the last group is very small. The great majority of accidents have a preventable factor. Careful ascertainment and analysis of the causes also reveals whether any particular type of accident is becoming more prevalent, and the reasons for any observed increase can be specially studied. A comparison of the accident statistics of different areas, may show that certain accidents are more prevalent in certain areas. For example, accidents in an industrial area or a holiday resort present a different picture from those of a country area. Again, you will get a different picture in a seaside resort or Spa containing largely an elderly population from what you would expect in a University town during term. These comparisons very often give one the clue to the means to be taken to reduce or prevent accidents.

A definite campaign *en permanence*, should be inaugurated in each local government area, and it should consist of (a) measures to reduce or prevent, (b) education to avoid accidents or to increase public awareness. From time to time the statistics of the area should be stated in relation to the campaign and certain portions of the campaign intensified or modified, in accordance with the observations.

Measures designed to avoid road accidents

(1) Better roads, well surfaced and cambered, with broad or dual carriageway. By-pass roads to avoid busy centres.

(2) Warning signs at dangerous places. Clear indication of major or minor road at right-angled crossings.
(3) Traffic lights where appropriate.
(4) Safety crossings.
(5) Good street lighting in built-up areas.
(6) Avoidance of visual obstruction of roads.
(7) Cars in good condition. Car taxation to be adjusted to discourage the keeping on the road of old cars. Periodic inspection of all cars over ten years old.
(8) Good tyres and brakes. Clean windows and windscreens.
(9) Driving tests and examination in knowledge of cars and of Highway Code.
(10) Speed limits for learners and accident-convicted.
(11) Prohibition of distracting wireless in cars.
(12) A clear and unambiguous Highway Code.
(13) Merit badges for drivers with so many years' clean record.
(14) Prohibition of cycling under 8 or over 70. Let them have tricycles.
(15) Cycle brakes and tyres to be in good condition.

Education to reduce or abolish road accidents

(1) Education of drivers in (a) Highway Code, and (b) skid control.
(2) Education of children in school. Kerb drill.

Both above to be given by Police or A.A. or R.A.C. Scouts.

(3) Education of children by parents.
(4) Posters with local accidents statistics and common causes.
(5) Special marking of local dangerous places. Accident maps.

Measures to avoid home accidents

(1) Well-lit houses, especially stairs.
(2) Stairs not too steep. Risers not too high. Narrow stairs are less dangerous than broad. Old folks' houses on one floor.
(3) Well-spaced kitchen, where one is not always brushing past the stove.
(4) Yard tiles and front step level and in good repair.
(5) Safety gas taps. Gas taps, electric switches and hot water taps inaccessible to small children. Switch guards.
(6) A sparsely furnished room, if possible, for children to play in.
(7) Shelves not so high as to necessitate standing on chairs or table.
(8) Carpets, especially stair carpets, never loose.
(9) Keep a bed or basket for the dog or cat, and encourage it to rest there. Tripping over animals is frequent.
(10) Avoidance of cotton or other inflammable clothing for young children.
(11) Fire guards.

Education to avoid or abolish home accidents

(1) Education of housewife (and her husband) by health visitors as part of her ante-natal and post-natal duties.

(2) Education of children by parent and health visitor at home, and at school by teacher, and occasionally by police officer or fire service man.

(3) Education of boys at school in simple house care and repair. It is the broken or loose thing that causes most damage.

(4) Education of old folk and those who have care of them by health visitors.

The Health Department and Accidents

(In writing this section, I wish to acknowledge my indebtedness to the article appearing in the Monthly Bulletin of the Ministry of Health and Public Health Laboratory Service for January 1952, under the signature of C. A. Boucher, M.D., D.P.H., of the Ministry of Health.)

An educational campaign and propaganda among the public costs money and time; it also involves the use of staff. It is obvious that some one department of local government must make itself responsible. The prevention of accidents, like the prevention of disease, is simply one method of maintaining positive health and preventing wastage of the nation's manpower, and it should be entrusted to the same people whose function it is to make arrangements for the purpose of preventing illness, etc., and to conduct health education. That is, of course, the Public Health Department. Moreover, the terms of the National Health Service Act allow the expense to be defrayed and to rank for grant as part of a scheme approved by the Minister for the carrying out of the provisions of Section 28 of the National Health Service Act, 1946. It would also be possible under the Local Government Act of 1948, Section 136, for a Local Authority to subscribe to or pay a proportion of the expenses of any voluntary body prepared to carry out this work. But the final answer must depend upon who will provide the staff, and it is my deliberate conclusion that the Public Health Department itself can do so.

The public may be approached in many ways: (1) By articles in the Press, and more especially by articles in the week-end or Sunday Press, when people have more leisure to study them. But it seems probable that against some of the more attractive fare offered to the public by the Press, the articles on accidents may fail to be read. (2) Posters. In these I have little faith. I do not believe that a single accident has been saved by that particularly ghastly poster entitled, "Keep Death Off the Roads", and posters today are an expensive method of propaganda unless one has reason to think that the public pay attention to them. (3) The distri-

bution of leaflets, etc. I am, again, of opinion that this method of propaganda does not go very far, although leaflets might be of some use in the waiting rooms of doctors' surgeries, or out-patients' departments, or other places where members of the public have, perforce, to pass some time, and may be glad to read anything. (4) Films. Here is a most valuable method of propaganda, for a very high proportion of the public do go to the pictures. The essential here would be not to try to do too much, but to have a short film between the main items of the programme, and to let it deal with only one type of accident. There are many excellent films easily obtainable. (5) Radio. In the hands of an attractive speaker radio can be a very fine instrument of propaganda. Again, time allocated should be short, and one type of accident at a time should be dealt with. One should not attempt to saturate the audience. (6) The suggestion has been made that medical officers should refer to accidents in their annual report. I agree, but I do not flatter myself that the general public spend much of their time reading annual reports of medical officers of health. They are not freely available and, from the point of view of many of the public, are anything but interesting reading. But if, when the annual report for any area is finished, the local Press are good enough to print some extracts on accidents particularly prevalent in the area, then much good can be done. (7) The best method of education of the public against accidents is to make it a part of the duty of the health visitor, who visits so many homes to be the counsellor and the adviser of the family. It is as reasonable that she should talk to a young mother about the prevention of accidents, as about the prevention of infectious fever; and in her work for the old she can afford much wise advice. *In my considered opinion the vital person in the educational campaign against home accidents is the health visitor quietly talking in the home.*

BIOGRAPHICAL NOTES

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LESLIE FARRER-BROWN, J.P., of Grays Inn, Barrister at Law.—Secretary of the Nuffield Foundation and the Nuffield Provincial Hospitals Trust. Secretary of the Interdepartmental Committee on Medical Schools. Governor of the Hospital for Sick Children, Great Ormond Street, and Vice-Chairman of the Highgate Juvenile Court.

R. J. F. H. PINSENT, M.A., M.D. (Cambridge)—In general practice in Birmingham for five years following war service. Clinical Assistant to the Diabetic Clinic, Birmingham General Hospital, and Assistant Medical Officer, I.C.I. Metals Division, Witton. Author: "The Future of General Practice" (*Lancet*, 1950) and "A Disease of Industry" (*Birmingham Medical Review*, 1952).

MEDICATION IN A GENERAL PRACTICE—*A Survey**

by R. J. F. H. PINSENT, M.A., M.D. (Cambridge).

THIS investigation was carried out in order to find the place of medication in the conduct of a general medical practice. I wished to find out how many of the conditions handled by the practitioner required medication as part of therapy, and what proportion of the problems encountered could be as well treated by advice, explanation and reassurance without recourse to the dispensary.

From man's beginnings the healer in the tribe has exercised his art with the aid of natural substances which he culled from his environment, and made up, prepared, dissolved or distilled as his knowledge of their properties increased. The administration of medicaments has also from earliest times been associated with ritual, and later with religious beliefs concerning the efficacy of the cure that was about to follow it.

As generation followed generation man began to enquire why his medicaments, once chosen empirically, had at times their desired effect; and active principles of herbs were isolated, pharmacological actions identified, measured and standardised. At the same time much of the ritual was shed, mandrake was no longer gathered by moonlight, and the conception that for every disease a "remedy" existed, if it could be found, was replaced by the knowledge that certain animal and plant derivatives, as well as certain naturally occurring pure substances, could be used to assist the body to overcome stress to which it was subjected by its environment.

In certain fields this knowledge has advanced to a point where almost specific aids may be employed to foster the patient's resistance, for specific immunity against some diseases can be artificially induced, and certain diseases can be controlled with antibiotics and sulphonamides. None the less there remains, at least in the field of general practice, a great mass of ill health of mind and body, for which the treatment of election is not chemical or pharmacological, but is the wise advice that

* This article formed the basis of a paper read to the Royal Society of Medicine on 21st November, 1951.

enables the patient to understand his difficulties and fully muster his own defensive resources.

This change in approach to medication is slowly taking place in the minds of the healers, and the doctor now consciously tries to prevent ill health among his patients, to teach them how they may avoid it, and how by alteration of their way of life they may mobilise the natural forces of their own resistance to best advantage.

The tradition of mystery and ritual which has been handed down from healer to healer and patient to patient remains strong, and is fostered and encouraged by many aspects of our daily life. The suggestion that for the patient's illness there is relief to be gained by medication is flaunted before his eyes from hoarding and newsprint; while, using a more subtle approach, commercial drug houses beguile the doctor by advertisement and circular with the elegance and efficacy of their latest preparation. Neither doctor nor patient can hope to remain entirely uninfluenced by the weight of this tradition, in its modern dress, though the former may from time to time turn it to good account.

The Survey

In attempting an objective survey of medication in my practice, it was decided to classify every prescription given out over the period of one year, and to relate their numbers to the opportunities offered for the administration of medicaments by the attendances of patients at Surgery. Classification of prescriptions was found to be a formidable task, for standards of relative efficiency as between drug and drug do not exist and cannot be closely drawn. The rough classification described below was made up empirically, and each prescription or drug used was measured against it in the light of its applicability to the particular consultation from which it arose. Each prescription was judged on its merits, and in consecutive consultations the same drug or preparation might be classified differently.

In an investigation such as this, carried out by one man, the personal factor will inevitably be large, and the results of the survey may be said to measure no more than the investigator's respect, or disrespect, for the pharmacopoeia. I feel, however, that the results do show something of the amount and quality of medication needed in the running of one particular practice, though the exact figures would undoubtedly differ were the investigation to be repeated by different observers.

Procedure

Record was made on analysis sheets of all Surgery consultations carried out in the year 1950. As each took place a note was made of the diagnosis, of whether the attendance arose out of clinical or administrative need,

and of the prescription, if any, given at the time of the attendance.

The medicaments employed were classified as follows:

Category	*Example*
A. Specific prophylaxis or specific treatment of a recognised disease.	Insulin, penicillin. Liver preparations, vaccines or immunising agents.
B. Symptomatic or other treatment likely to have some effect on the course of a condition, recognised or suspected.	Morphia, phenobarbitone, in epilepsy. Neptal in heart failure.
C. Symptomatic treatment not likely to directly affect the course of the condition.	Stock mixtures, compound tablets, lotions, applications.
D. Placebo.	
E. No prescription.	

The classification was designedly elastic, and, as has been stated, a medicament might be placed in group A or C according to its applicability to the individual patient's condition. Where two or more prescriptions were given at an attendance by a patient, record was made of that most likely to be therapeutically useful.

Preliminary sorting of attendances according to their origin, whether arising from clinical or administrative need, was essential, in view of the large number of items of service rendered by the general practitioner on purely administrative grounds, and out of which no prescription might be expected to arise. These administrative attendances, for certificates, signatures, or on miscellaneous non-clinical grounds were subtracted from the total of those attendances at which no prescription was given to the patient. Attendance by the patient to obtain further supplies of a medicament was regarded as a consultation arising from the condition under treatment, though the attendance more probably derived from the administrative and economic need to obtain a National Health prescription for a free supply.

Results

In computing the results of the investigation the daily totals of attendances, clinical and administrative, and of prescriptions in order of their estimated value, were consolidated by months and represented as percentages. Consolidation of the results on a monthly basis was decided on for two reasons, first any seasonal difference in demand for, and nature of, treatment would become apparent, and second any gross change in the estimation of the values of medicaments by the observer would be shown.

Before proceeding to describe the distribution of medication among the 7,064 consultations carried out during the year, the number of non-clinical or administrative attendances must be considered in passing.

Here the distribution of prescriptions has been shown as a percentage

of the total clinical attendances for each month, according to the classification already described. It will be seen that the levels at which medicaments of different values were prescribed did not greatly alter during the year, indicating that no gross alteration in value assessment took place.

The classification groups will be considered in turn.

Group A

The amount of medication which was prescribed under this, the most "specific" heading, was surprisingly small, varying between ten and fifteen per cent through the year, with the highest figures occurring in the winter and spring, a seasonal distribution which might well have been predicted. Since penicillin was by far the most frequently used medicament in this group the diagram might almost represent the seasonal incidence of conditions judged on clinical grounds to be penicillin-sensitive.

Immunisation procedures were included in this group, and as these were not carried out in the summer months the autumn rise may be in some measure attributable to an accumulation of babies requiring anti-diphtheria inoculation.

The remaining "specific" prescriptions bulked small: insulin for a few diabetics (for part of the year some diabetics obtained their supplies from a hospital clinic); liver or vitamin B_{12} in three cases of pernicious anaemia was given regularly month by month; and where it was indicated, iron was regarded as specific for simple hypochromic anaemia.

Group B

In this group of prescriptions was included those thought likely to have some effect on the course of the condition for which they were prescribed, as opposed to mere symptomatic relief, though differentiating prescriptions in this class from those in the next was by no means exact. Each case was considered on its merits, and an established diagnosis was not considered prerequisite for the employment of a drug which might aid recovery by relief of symptoms.

It is not possible to list the medicaments prescribed in this group, nor the conditions for which they were used. Adrenalin and its derivatives in asthma, antihistaminics, phenobarbitone as suppressive in epilepsy, Neptal in heart failure, these were included, as were most if not all prescriptions recommended by specialists to whom patients had been referred for advice.

Drugs of this class were prescribed at about 10-11 per cent of consultations, a measure of those attendances at which real help could be given by medication, in addition to any benefit the patient might derive from the suggestion that the medicament carried the power of recovery with it.

The monthly distribution of 1,458 consultations not arising out of clinical need was follows:

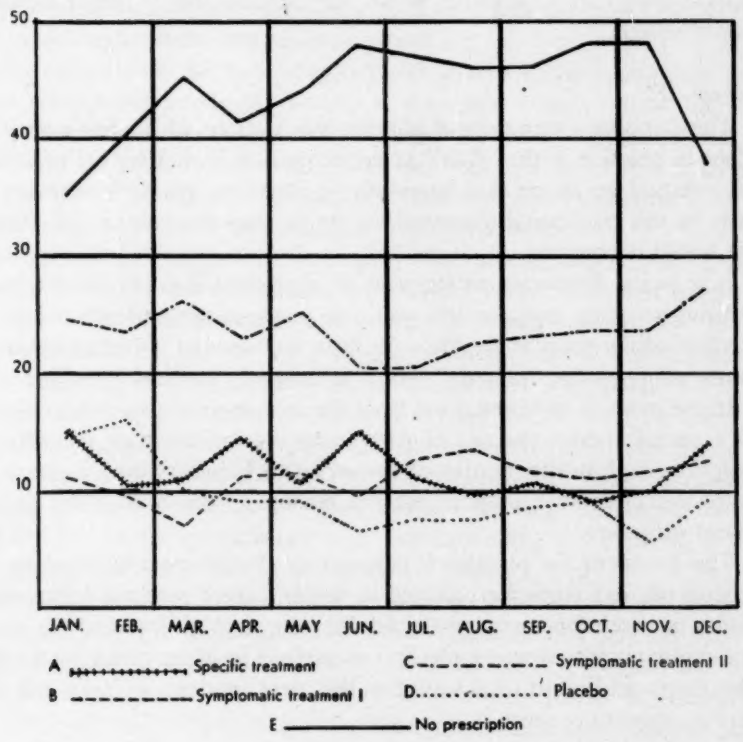
	Per cent		Per cent
January	26	July	25.5
February	24	August	21.5
March	28.5	September	29
April	27.75	October	29
May	27.75	November	25
June	21.5	December	28

It will be seen that this quasi-medical work, demanding the possession of a medical qualification but not the exercise of clinical skill, averaged 20.6 per cent of all Surgery work over the year reviewed. The general practitioner may perhaps wonder if it was for this that he was examined in the anatomy of the brachial plexus and the physiology of the chloride shift.

The diagram shows the distribution of medication as between 5,606 "clinical" attendances at Surgery.

ANALYSIS OF PRESCRIPTIONS

Percentage Distribution of Prescriptions by Classification Groups.



Group C

This group contained all those prescriptions in which it was thought that any pharmacological action the prescription might have was outweighed by its suggestion value, though in prescribing due regard was paid to the recognised pharmacological actions of the preparations used. Coughs were treated with linctuses and expectorants, stomachics were given for gastric upsets, lotions, ointments and applications were included under this heading.

It is impossible to apportion the psychological and the somatic effect of medication, but prescriptions were included in this group where benefit might be expected to follow combined therapy of mind and body.

In general practice there are to be treated many disorders arising from the maladjustment of the individual to his surroundings, with the production of symptoms, and often signs, that are amenable to medication within this group, though whether their response to treatment lies to the credit of the chemical content of the bottle or tablet or to the anticipation of the patient cannot be told.

This group accounted for the largest number of prescriptions per month throughout the year, from 20 to 25 per cent, and reflects the incidence of comparatively trivial disorder which may be amenable to pharmacological improvement.

Group D

The important thing about placebo medication, which has a very real place in practice, is that it should be recognised as such by the prescriber, who should be aware that its power to assist the patient's recovery lies only in the traditional shape of the bottle and the colour and taste of the liquid it contains.

It is in the deliberate prescription of a placebo that the practitioner is utilising to good purpose the tradition in the older patient's mind that medical advice must be accompanied by a sacramental bottle, and that that bottle contains the "remedy" which is uniquely applicable to "his case."

In the practice reviewed it has been the rule never to prescribe a placebo to a patient under the age of forty, and the incidence of placebo prescription, high in the months of January and February with a rise in the following December may reflect the seasonal liability of older folk to trivial disorders.

The nature of the placebo is immaterial. Patients accustomed to, and relying on, red medicine received it, whilst others received tablet medication as a reinforcement to the advice they were given. Only in exceptional circumstances was a placebo prescribed in order to dam a flood of symptoms and clear the way for the next patient to take his turn in the consulting-room.

The total amount of placebo medication was less than 10 per cent for most of the year.

Group E

The largest, and by no means the least important, group of consultations was that in which no medication of any kind was prescribed, averaging between 40 and 50 per cent of consultations each month.

In the management of conditions in this group a conscious effort was made to replace medication by advice, guidance and health education. This policy arose from the belief that no person can completely relieve the owner of a body and a mind of the responsibility for their care, and that even within the framework of the National Health Service—with its direct inculcation of doctor-dependence into the public mind—there is room for guided self care in such matters as lie within the capacity of the patient's intelligence and understanding.

In general practice many trivial complaints arise from some lack of adjustment of the individual to the environment of his home, his work, his diet, or even to his neighbouring bacteria. It is these that are to be handled by the general practitioner in his true capacity as medical adviser, and he must teach his patients how they may best overcome their difficulties and make their own adjustments.

The mother with her first baby requires guidance, the young man who fears tuberculosis needs the therapy of a complete examination followed by reassurance, the old patient must be taught how to live up to, but within, the limits of her failing powers. This teaching can only come from the family doctor, the general practitioner, who is perhaps serving a more useful purpose when he advises than when he prescribes.

Education of the patient to expect and accept expert advice and guidance rather than medication and mystery takes time, but from the point of view of both doctor and patient it is time well spent. Every lesson learned by patients in handling problems within their compass may mean one less consultation when that problem next arises.

The extent to which education can be carried out depends on the type of patient comprising the practice, and the inclination and time available to the practitioner. There can be few practices in which this policy, when carried out over a number of years, has not led to a diminution in the number of trivial attendances with corresponding time saved to be devoted to the fuller care of more serious illness.

It may be said that the education of the patient will not be accepted as a substitute for the medication which tradition has granted such a high place in the patient's esteem, and no doubt my practice has lost patients whose confidence could not be retained, yet in an industrial area, subject to considerable population fluctuations, the practice has

reached a size which requires strict limitation if a reasonable standard of work is to be carried out within it.

Conclusions

Broad conclusions only can be drawn from this survey of medication in a general practice, for the personal factor in assessment of the indications for the administration of medicaments, and in estimating their value when given, cannot be eliminated unless by further similar investigations in different practices.

It has perhaps been established that it is possible, without detriment to the practice, to treat patients with rather less emphasis on medication than the published figures on N.H.S. prescribing would suggest, and that there is a wide range of conditions met with daily by the general practitioner in whose handling medication need play no part.

In these days an illness may be presented by the patient first as something of which documentary evidence must be obtained, and second as a condition requiring relief by medication. He may be content that his doctor's solution of his problem be one involving only certification and prescription.

May we not look forward to the day when the patient will regard his general practitioner as a doctor in the classical sense, a teacher with whose help he may remain well, and an adviser on how his illness may best be overcome?

BIOGRAPHICAL NOTES

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FRANK TYRER, M.A., B.Sc.—Senior science master, Waterloo County Secondary School, Lancs. Has spent 24 years in learning biology, learning how to teach biology and experimenting in teaching biology. Lectures and writes on teaching biology, social studies, general science, visual aids. Is now preparing a series of four school biology textbooks, the first of which appeared this Spring.

MILESTONES IN MEDICINE

19. *Fracastor and the Morbus Gallicus*

By E. Ashworth Underwood, M.A., B.Sc., M.D., D.P.H., F.L.S., *Director, the Wellcome Historical Medical Museum; Hon. Lecturer, University of London.*

In the autumn of the year 1494 the French King Charles VIII assembled a great expedition to march against Italy. A large part of his forces were Swiss, and another considerable part were Gascons. During their march southward they passed through the luxurious southern parts of France, in which it is now considered that there were cases of a peculiar disease which was spread by sexual intercourse, and which was probably of a chronic nature. In Italy this army of Charles carried all before it, and its victorious progress was only stayed when it reached the city of Naples in 1495. Naples proved a formidable bulwark; Charles had to lay siege to it, and this siege lasted a long time. It was during this period that the disease which has been mentioned above began to spread rapidly through his army in a very severe form. In a relatively short time the fighting power of the forces was much reduced, and the morale of the individual troops fell rapidly. Charles had to raise the siege and return home. It was a sad, sick and decimated host which eventually arrived back in France.

Soldiers, like all other mortals, are inclined to look for scapegoats. The victorious French troops, now sadly disappointed, blamed their ultimate failure on this disease, and they said that they had contracted it from the Italian civilians. But the Italians were sure that the disease had been brought to Italy by the French troops. They called it the "morbus Gallicus"—"the French disease." For a long time this name stuck. The disease is what we now know as syphilis. The way in which the name was introduced is peculiar and far from what might be expected.

At the time when Charles set off on his famous march, there was living at Verona a youth of sixteen, whose name was Girolamo Fracastoro—or Fracastor, as he is now commonly called in English. This youth had already studied widely in classical literature and in the other disciplines

of a humanistic education, and he now went to Padua to study medicine. By the time he was twenty-four he was professor of logic at that university. Later on he returned to Verona, where he carried out those studies and researches which made him famous as an astronomer, mathematician, geographer and biologist. Further, he was also well known as a writer of poetry in the Latin tongue. In 1530 Fracastor wrote a long poem entitled *Syphilis sive morbus Gallicus* (*Syphilis or the French Disease*), describing what happened to a beautiful young shepherd called Syphilis after he had insulted the god Apollo. Apollo had his revenge by striking him with a horrible malady, which is described in great detail, so that we recognise the signs of a very severe and intractable form of syphilis. The name of the shepherd was soon applied to the disease, and from that time the condition has been universally known by this name. In this poem Fracastor also describes the treatment of the disease by mercury and guaiac. He had also more substantial claims to fame, since, at a later date, he wrote the first book in which the nature of infection is scientifically discussed.

To return for a moment to the disease "morbus Gallicus", it should be said that the dispersal of Charles's hired mercenaries spread the condition far and wide through Europe. From about the year 1496 onwards, various treatises on the disease were published. Thinkers began to consider why the malady had suddenly appeared in all places where it had been absent before. A convenient event of the immediate past was seized on to provide the explanation. Columbus had discovered America in 1492, and it was known that during the return voyage many of his sailors had been suffering from a disease, contracted from the natives of Haiti, which was presumably the "morbus Gallicus". It was therefore said that syphilis had been absent from Europe until it was thus introduced from the New World. Since then all those who have written on the origin of syphilis have been divided broadly into two schools of thought—those who do, and those who do not, believe in the pre-Columbian origin of the disease in Europe. Even yet the question has not been decided. Against its pre-Columbian existence in Europe as well as in America is the fact that, while many bones which are pre-Columbian in date, and which show definite evidence of syphilis, have been found in America, the evidence for similar finds in Europe is by no means unassailable. For the pre-Columbian origin in Europe is the fact that descriptions of a disease which may have been a mild form of syphilis are known in the late medieval period. Whatever the truth of the matter, it seems fairly clear that the disease which afflicted Europe in the closing years of the fifteenth century was a much more severe form of syphilis than we know to-day—a fact which may be due to the increased use of mercury early in the following century.

Girolamo Fracastoro (1483-1553)

Children of Waterloo County Secondary School at work

Posters prepared at the school

BIOLOGY WITH SENIORS IN A SECONDARY MODERN SCHOOL

Part 2

By FRANK TYRER, M.A., B.Sc.,
Senior Science Master, Waterloo County Secondary School, Lancs.

IN the first article we discussed the work in biology which had been taken with the senior boys and girls in a Secondary Modern School. Here we will describe how the work has been carried out.

Choosing the Topic

Before putting the matter to the children I make a list of possible subjects, some suitable for individual study and some suitable for group work. I do not let the children see this list, but at the first meeting I discuss with them the type of work they are going to do, and ask them to suggest subjects they would like to study. When they have made their suggestions, I discuss with them whether it will be possible to do them or not. If they are not able to put forward any ideas suitable for study, then I give them my list and let them choose from that.

My main task in the choosing of subjects was to see that the work would be well within the ability of the individual or group. It was no use letting B or C stream children carry out a study which might involve a fair amount of looking up references and reasoning. The studies for B and C forms must of necessity be more factual than the studies within the range of the A form children.

For example, in one year there were in the upper form a number of very good A stream children, and it was possible to carry out a study which really did require a fairly high standard of intelligence. So we did the study "Lighting and the Eyes". Working in conjunction with the history teacher the same children carried out a study "Lighting through the Ages". In the next year we had a rather mixed group, so the brighter children were set to work on a study of "The Public Health Services" while the B and C stream children did some work on "Pests in the Home".

Method of Work

Having chosen a topic or topics for study, we discussed ways of carrying it out at the next lesson or meeting. Generally we broke down the subject into different sections. In the study, "Smoke and Smoke Abatement",

for example, at the first meeting, it was decided that the study should be carried out under the following headings :

1. What is smoke ?
2. The trouble and harm caused by smoke.
3. What can be done to reduce the smoke menace.

The form then divided into three groups, each taking one of the sections. Here again I had to step in and suggest that it would be better perhaps if John tackled this problem and Harry that one—without, of course, telling them that the problem I was suggesting John should tackle was the more difficult of the two, and that John, who was more intelligent than Harry, would be able to do it.

Sometimes the children arranged amongst themselves who were to do the various jobs. Mary and John liked to sketch and paint, so they did the actual poster illustrations. Fred and Joan liked to use the UNO stencils, so they were quite pleased to let Bill, Phil, and Edna collect most of the material, looking up information, carrying out experiments, and writing to various authorities and firms. They did do some of the research, however, and further to make sure they knew what was being done, the work would be held up every now and again while the various members explained what they were doing. When a boy or girl had completed his work he was given an opportunity to display and explain it.

Before they actually started the work I would discuss with them, either as a whole group or with each section, possible sources of information—books, pamphlets, and other material ; firms, manufacturers, and authorities who might help ; experiments to carry out. It is in this matter of helping with information that I have found our local Public Health Department extremely helpful. They have never failed at any time to give advice, assistance, and information whenever the boys and girls, or I myself, asked for it.

Wherever possible we make a special point of relating these studies to our own neighbourhood, so that they are more real to the children. For example, in dealing with "The Disposal of Sewage and Refuse", the topic was dealt with generally and then followed by a study of how the disposal was carried out in our own district. It was done in this order because the children had already learned something about this work when dealing with excretion in the second or third year. In the work on "Smoke and Smoke Abatement" examples of the corrosion of buildings by smoke were taken from the neighbourhood.

The children now set to work looking up references, searching for material, performing experiments where necessary, and looking out for illustrative matter. Some are able to carry this out unaided, but others need some guidance and assistance, especially in making use of facts and information once they have found them. In this kind of work they need

much more practice, which could very well be given in the English course. I constantly checked the rough notes they wrote. Frequently I would discuss points of difficulty with individuals or suggest where something needed elaboration. They then wrote out their account roughly. This was corrected, and the work then written out neatly and illustrated. If it was intended to make posters, then the boy or girl drew up a rough design for it and we would discuss it together. Often others of the group would join in the discussion and offer their criticism and suggestions. When everything was satisfactory, the child would either do the final poster himself or get one of the artists and printing experts to do it.

It was intended that when each study was completed the children taking part should display their work to the whole class and each explain what he had been doing. He was also expected to answer any questions he might be asked. This has been done on most occasions.

Variation in Method

Experiments have constantly been tried and variations made in methods of carrying out the work. How this has been done can best be illustrated by taking one topic—"Health and the Community"—and showing how it was carried out on three different occasions by the Fourth Form. In each case the form had previously had lessons on "Bacteria and their Work" and on "The Battle for Health".

Method 1. A preliminary account was first given of the organisation of the health services of the country—the Ministry of Health, the Ministry of National Insurance, and the Health Committees of the local Councils. This included a brief description of how the health services developed and of the struggles and difficulties of the early pioneers in this work. The form then met the Chief Sanitary Inspector, who briefly outlined the organisation of the public health services. Next visits were paid to the local clinics, the sanitary or borough health department, the corporation depot (to see the various vehicles and machines used to keep the town clean and to talk to the men who use them), the refuse tip, and to the sewage disposal works.

Each child made notes of his visits and in the biology or English lessons wrote an account of the work of the public health services. Thus when the visits were completed each child had written and illustrated his or her own booklet describing "The Health Services of Our Town". This was illustrated by their own photographs, and pictures from books and magazines, as well as from the Medical Officer's reports, copies of which are in the biology reference library.

Finally a summary lesson was taken and we had a discussion on the health services. This discussion was the highlight of the study, and from the questions asked and the suggestions put forward it was clear that

the children had taken a keen interest in what they had seen and heard.

This was followed by another lesson in which an account was given of other health services and of what was being done in other countries. The school was fortunate one year in having a talk from a doctor who until recently had been medical officer supervising the health services provided for some native colonies in East Africa.

Method 2. On another occasion I tried out a different approach to the study. Instead of making a whole series of visits to the health services, a number of people concerned with public health were invited to come to the school to tell the seniors what their job was in the maintenance of the town's good health. Each visitor spoke for 15 to 20 minutes, and the rest of the time was given over to questions and discussion. The first two speakers were the Chairman of the Health Committee and the Medical Officer of Health, who gave a survey of the whole of the health services of our town. Then came the Chief Sanitary Inspector, the Senior Health Visitor and Nurse, a representative from the Borough Engineer's department, the matron of a hospital, and a doctor. For the talk on the disposal of refuse I also wanted a bin-man to tell of his work, but alas ! the authorities thought it would be better if we had someone from the administrative staff of the Borough Engineer's department !

In addition to these talks by visiting speakers, one or two visits were made to the local clinics and health department.

Method 3. Recently I tried out a variation on this work. I gave the form a preliminary survey of the public health services, and then told them they were to make a film-strip dealing with "The Public Health Services of Our Town". This was not as difficult a task as it might seem to these senior children, for although it was their first attempt at making a film-strip they had used film-strips themselves in their work ; they had had some experience in taking photographs and in making enlargements for use in their work; and most of them, as members of the School Film Society, had assisted in writing scripts and in producing films.

The work was left entirely to the pupils, I myself keeping in the background and giving advice whenever it was necessary. In preparing the script they visited the health department, consulted the Medical Officer's reports, and paid visits to the various health services to see the work done and what kind of photographs they could take.

It was interesting to see how the children used their initiative and their own ideas. Two of the boys went down to the Corporation depot to take photographs of the vehicles. Apparently while there they chatted freely with the man in charge, asking him all kinds of questions about the work done there, and getting the workmen to move the various vehicles about to the best spots for taking the photographs. On another occasion two of them went out to take a photograph of the storm water

pumping station. Opposite this is a public park. When they had taken the photograph of the pumping station they discussed whether a public park could be considered a health service, since it was one of the "lungs" of the town. So they came back to the school to tell us they had not only taken a photograph of the pumping station, but also of the park. After a discussion by the whole group, it was decided that the park could be considered as a health service and therefore should be included in the film-strip. Although I had joined in the discussion and suggested that it was not usually classed as such, they took the broader view. They also included shots of the nursery school and one or two other services which are not considered officially as part of the public health services, but do play their part in maintaining the health of the community.

The taking of the photographs, choosing which to use, making the enlargements, setting up and taking the titles, were done by various members of the form. When all the photographs had been taken they were set out in the biology room and there was a general discussion about the arrangement and order of the frames. Then they were taken down to the health department at the Town Hall for final advice before being sent off for processing. While all this was going on, other children had been busy collecting information about the health services in order to write the notes to go with the film-strip.

This, I think, was one of the most interesting experiments I have tried in teaching biology. The children had to find all the information for themselves, select what they wanted, use their initiative, before they could make the film-strip or write the notes. It was well worth all the trouble involved.

Preparing an Exhibition

During the Summer of 1950, there had been some discussion in the House of Commons and the local press about the need for a "Clean Food Campaign". On returning to school after the summer holiday, I discussed this with the seniors, and we decided to do some work on "Clean Food", and imagine we had been asked to prepare an exhibition on this topic. I realised that it might be a somewhat difficult task and that I should have to give more than the usual amount of advice and assistance. It was very fortunate that the form concerned had had lessons on bacteria, and had made cultures and done other experiments. This proved a good foundation for the study.

At the first meeting we discussed various questions—Why is so much heard about food poisoning? What are the causes of food poisoning? What can be done about it? This at once suggested to us the headings under which the exhibition should be arranged :

Section 1—The Prevalence of food poisoning.

Section 2—Causes of food poisoning.
„ 3—Spreaders of micro-organisms which cause food poisoning.
„ 4—What you and others can do about food poisoning.

We next decided that rather than divide into four groups, we would work as one group and deal with each section in turn.

At the same lesson we discussed possible sources of information, and these included books in the biology room, various health organisations (local and national), newspapers, and magazines. The Central Council for Health Education were particularly helpful in supplying information.

Some experiments were tried on making cultures of bacteria from "left-over" foods, from fresh and stale milk, from clean and dirty dish-cloths, and cracked crockery, but these were not always successful. Besides, we could not, of course, say whether the bacteria we found were those which cause food poisoning.

When they had collected their information and material together, the children began to design their posters and discuss the best way of displaying the material. Often two or three would be at work on the same point. This meant that there was some overlapping. When making the rough drawings we would choose the one we thought best illustrated the point. Sometimes we included all the posters, for it was found that some of the group produced posters which were practically all drawings with short captions, i.e., "visual" posters, which would appeal to those people who could not be bothered to read the more "serious" posters which some produced and which gave a great deal of written information.

Some of the boys and girls spent the greater part of their time in making the drawings for the final posters or in doing the printing with the UNO stencils. As usual, however, steps were taken to see that they understood all that was being done.

It was our intention at first to make only a small exhibition, but we collected so much information that it soon became obvious it was going to be quite a big affair. It grew so much that we realised we would never finish it in one year working in the ordinary lesson periods. Thanks to the enthusiasm and interest developed, various members of the group would work in the lunch break and after school hours, and by this means the work was eventually completed.

While the work was going on it was interesting to see how one member of the group would go over to see the poster another was producing and criticise or admire it or offer some suggestion to improve it. The boys and girls who had collected the information would jealously watch over those who were making the final posters to see that they turned out first class work. It was interesting to note also, how, though using their own individual ideas, they worked, not as individuals, but as a team, and how as a team, they all worked to bring the whole idea to fruition.

LACTATION AND EDUCATION

Two Related Failures

By ANNE BURGESS, M.B., Ch.B., L.D.S., JOHN BURTON, B.A., M.R.C.S., L.R.C.P., D.P.H., and PRISCILLA MILTON.

EDUCATION is "acquiring the art of the utilisation of knowledge".[1] This review is an attempt to gather some of the scattered fragments of knowledge, useful to practical workers, about breast feeding and education—controversial subjects where a well-informed and balanced judgment is essential. Selection of facts is unavoidable and will inevitably be influenced by the ideas and sense of direction of the selector. But even "history" is subject to this limitation. Professor Carr holds that the historian's choice and arrangement of facts is dictated by presuppositions, conscious or unconscious, closely related to the conclusions he is seeking to establish.[2]

An investigation[3] into the literature on infant care published between 1890 and 1949 reveals that since Hippocrates most writers have urged the benefits of breast feeding. Why should this necessity to exhort mothers to feed their babies have existed for so long? The present situation is, indeed, "no new thing under the sun".

The general picture today, as described by the "Follow Up Survey," 1948,[4] agrees closely with that found by others.[5,6,7,8,9] This survey of 4,669 babies found that the average duration of breast feeding was 4.2 months, 53 per cent still being breast fed at the end of the second month, and 28 per cent at the end of the seventh month. On the other hand, failure to establish lactation was found to occur in not more than 21 per cent of confinements. Why then does this failure to continue breast feeding occur? Many reasons have been put forward by the mothers, and by those in contact with them, and several attempts made to analyse the reasons.

In about 50 per cent of cases no reason can be given by the mother for her inability, or her refusal, to feed her child.[4,6,7,8] In the other cases, the reasons fall into four categories—reasons associated with conditions of the breast or of the infant, or of the mother's health, or associated with the advice of the medical adviser.

It is interesting to compare these careful records with the reasons

given spontaneously by medical officers and health visitors when asked "Why don't the mothers breast feed their babies ?"

The following reasons are, in our experience, the most common:

(1) Mothers are too busy and have not enough time.
(2) They are overworked and do not have enough milk.
(3) The mother goes out to work.
(4) They are badly fed and do not have enough milk.
(5) They think their milk disagrees with baby.
(6) They think their milk is poor in quality because of its appearance.
(7) They like to see what baby is getting.
(8) They see the bottle fed babies putting on weight more rapidly, and change to artificial feeding.
(9) The mother does not want to feed her baby.
(10) The grandmother likes to have baby on the bottle.
(11) The general practitioners do not encourage breast feeding.
(12) The hospitals do not encourage breast feeding.
(13) It is too easy to get artificial foods and the constant advertisement influences the mother.
(14) Lack of privacy due to overcrowding.

With the exception of (5), (9) and (10), these reasons seem to have a certain amount of tacit support from the doctor and health visitor, and are apparently accepted by them as fairly " reasonable " reasons. It is therefore important to see how they agree with the recorded facts available at present. In the survey published under the title *Maternity in Great Britain*[8] infant feeding (actually " the incidence and relevant factors in bottle feeding " rather than " the absence of breast feeding ") was investigated from many angles. The relevant findings are given briefly:—

Reason (2)—" overwork ": Of those mothers who had domestic help during pregnancy and the puerperium, 42 per cent were bottle feeding at three months, as compared with 41 per cent of those who had had no help. Nor was there any difference between those who had started to do a full day's work in the house 15 days after childbirth, and those who did not resume their household duties until 15–30 days after delivery.

Reason (3)—" the mother goes out to work ": The intention to return to work did not make early weaning more likely, except in the case of the unmarried mother. Forty-two per cent of those who did not intend to return to work, as compared with 43 per cent of those who did, were wholly bottle feeding their babies by the third month. Indirect confirmation of this is also to be found in the report of the Medical Officer of Health of Warrington[9] on the enquiry into the high infantile mortality in that town. It was found that in only one case did the mother return to work before three months after delivery, even after the death of the baby.

Reason (4)—" they are badly fed and do not have enough milk "—is

more difficult to assess, as " bad feeding " can be interpreted in different ways. It has been found by several workers[10,11,12,13] that an improvement in the antenatal diet produced an improvement in the survival rate of the child, and also affected the ability to establish, and still more to maintain, breast feeding.

The amount of protein consumed by the nursing mother is an important factor in the maintenance of lactation. McLester, in his book *Nutrition and Diet in Health and Disease*, states " Protein is an important limiting dietary factor in lactation. The milk has the same protein content (within limits) whatever the nature of the diet, but when the intake of protein is small the output of milk is diminished to a level which is commensurate with the supply."

Kon and Mawson[14] in their report *Human Milk* investigated the diet of lactating women in Reading and Shoreditch, and found that " by taking advantage of the special allowances for pregnant and lactating women, and of such unrationed foodstuffs as were available in addition to the ordinary rations, it was possible for a mother in England in wartime to obtain a high proportion of, or all, the recommended allowances of nutrients "—including protein.*

The economic aspect was also discussed and it was found that it was less expensive for a mother to buy National Dried Milk to feed her baby than it was to buy the rations and supplements for herself. But the evidence suggested that factors such as an unwillingness to change dietary habits, or the sharing of the supplements with others, were probably more important reasons than expense for any failure to reach the full diet.

The relationship between the maternal diet and the breast milk is not yet fully understood, but it would appear that successful breast feeding can be maintained by mothers on very inadequate diets. This was observed in the Belsen concentration camp, during the siege of Leningrad and in other places suffering varying degrees of starvation. Among Bantu women on diets known to contain well below the recommended quantities of milk, butter, eggs, meat and fruit, breast feeding is successfully maintained for six months or more and the milk appears to be within normal limits of composition.[15]

Reason (11)—" The general practitioners do not encourage breast feeding "—is one which constantly recurs. The findings of the survey *Maternity in Great Britain*[8] support this statement. In Scotland, where the practitioners play a larger part in giving antenatal supervision, 22 per cent of women supervised by practitioners are bottle feeding their babies by the tenth day after birth, as compared with 13 per cent of those who have been supervised at antenatal clinics. In investigating the higher rate of failure

* The recommended allowances are those of the League of Nations (Magee) and/or the U.S.A. National Research Council.

to establish breast feeding in Scotland compared with England (57 per cent bottle feeding at the eighth week after delivery as compared with 41 per cent in England) it was found that while unexplained milk failures are as common in Scotland as in England and Wales, the higher rate of bottle feeding in Scotland is largely due to advice from doctor or midwife (8 per cent as compared with 3 per cent in England and Wales), trouble with breasts (9 per cent as compared with 4 per cent), baby being unsatisfied (7 per cent as compared with 6 per cent).

Reason (12)—" The hospitals do not encourage breast feeding ": This is a very widely held belief, but one which is not confirmed by the most recent evidence. The survey *Maternity in Great Britain*[8] found that failure to establish lactation occurred in 13 per cent of hospital, 17 per cent of home, and 21 per cent of nursing-home confinements. Dykes (1949)[16] also found that babies born in hospital had a slight advantage.

The remaining reasons would, it is suggested, yield to effective education —perhaps not always education of the mother, but still education.

The first reason, that the mother is too busy and has not time to feed her child, implies that bottle feeding is time-saving because the baby can be left to suck the bottle by itself, or the feed can be given by someone else. This is such a naive admission of failure to educate, not only regarding the technique of breast or bottle feeding, but also regarding the essential nature of the feeding act, that the second question gains importance: Why does this failure to educate occur ?

All aspects of the learning and teaching situation cannot be considered in this short review. We can only pick out some of the factors which seem important, and try to answer the two basic questions—"What is to be learned ? " and " How best can mothers be persuaded to use this knowledge ? "

The Value of Breast Feeding

One attribute of the successful teacher which Professor Whitehead holds important is " the resonance of his own conviction." This " resonance of conviction " has been lacking in the medical profession with regard to breast feeding—so much so that in many clinics today the virtues of breast feeding are extolled against a background of tins of dried milk.

This doubt and confusion has arisen as artificial feeding became more skilful. The desire to work with something measurable and controllable is strong in human nature, especially when dealing with a difficult problem such as the sick baby in hospital. Gradually the carefully supervised artificial feeding which had proved beneficial to the sick child was advocated for the healthy child also.

But some always continued to advocate natural feeding. Twenty years ago the experienced general practitioner could reassure the anxious mother

that her breast fed baby would not " get the measles " from the elder children—" *because* her baby was breast fed". His definite statement was the result of years of observation and deduction—not " real evidence, statistically confirmed ", as we understand it today. But now, twenty years later, we can ask ourselves if there is any " real evidence " as to the value of breast feeding in protecting a child against such infections.

Several investigators[17,7a,19,5a] have compared the incidence of mortality and morbidity in breast fed and bottle fed babies. All found higher mortality and morbidity rates in the bottle fed babies, though the comparative figures differed in degree. Though no marked difference in the infant mortality figures for breast and bottle fed babies was confirmed in the " Follow Up Survey ", it was found that the breast fed babies are more likely to survive, especially in the poorer social classes, and less likely to suffer from gastro-enteritis and lower respiratory infections in the early months. Breast feeding in the early months of life confers relative immunity to measles which persists during the second year.[4,21]

Other evidence[22] exists as to the increased incidence of infantile eczema and the increased incidence of gastro-enteritis in the artificially fed. In 1949 there were 165 admissions to Great Ormond Street Hospital for Sick Children of infants suffering from gastro-enteritis. Of these, only two were fully breast fed, i.e., 1.2 per cent; and for 1950 the figures were five fully breast fed out of 160 admissions, i.e., 3.1 per cent (Schlesinger).[23]

Evidence does, then, exist that breast feeding gives the child some resistance to the infections in the first year of life which artificial feeding does not provide. The lack of agreement concerns only the degree of resistance conferred.

When we consider the emotional health of the child we find more evidence on the value of breast feeding in laying the foundation of sound emotional and mental health. This evidence is, however, less direct and clear cut.

Dr. Bowlby[24] discusses the available knowledge on the effect of lack of adequate maternal care on the growing child. "The evidence on which these views are based", he writes, "is largely clinical in origin. Immensely valuable though this evidence is, it is unfortunately neither systematic nor statistically controlled, and so has frequently met with scepticism from those not engaged in child psychiatry."

The evidence from many independent workers is collected, and critically examined. That so many different people working independently should reach the same conclusions leaves little doubt of the validity of such conclusions, namely that lack of maternal care causes grave personality defects in later life. Stunting of the child's physical, mental and emotional development, a failure to conceptualise and think in abstract terms, and a failure to give or receive affection, all contribute towards the development

of an inadequate personality. The delinquent boy or girl, the irresponsible, amoral person who cannot realise ethical standards of conduct, and the parent incapable of giving and receiving love and affection in her relationship with her own child later on, are the result of lack of adequate maternal care in the early months and years.

The breast fed child, because of the closer and more frequent contact with its mother, can experience more fully and easily " that warm, intimate, continuous relationship which both enjoy" and which is essential for mental health later on.

Bottle feeding carried out with the same loving care can, and should, approximate very closely to the natural method, but it is only too easy for the mother to be tempted to save time by leaving the baby to have its bottle in the cot or pram. And once this step has been taken the next follows almost automatically. The baby is given its bottle by anyone who happens to be about at the time, and the greater deprivation, the lack of a continuing relationship with *one person*, begins—undermining the child's feeling of security and building up in his mind a picture of a world that is unpredictable, unreliable and unloving.

There are two conclusions, then, about the value of breast feeding that are justified by the available evidence:—

(1) That breast feeding increases the child's resistance to the infections in the first year of life.

(2) That breast feeding lays the foundation for healthy emotional development and mental health.

But only two. Nowhere is there any evidence which says "If you want a nice fat baby quickly you must breast feed him"—in fact, the evidence is all the other way.

Educational Technique

Here is one reason for our educational failure—lack of selectiveness. We have promised the moon, when in fact we are only justified in promising two stars—very bright ones though they be. At the same time we have emphasised in practice (and people learn from what we do more than from what we say) the one thing we could not guarantee from breast feeding. By constantly stressing the importance of regular weighing we have unwittingly trained the mother to regard a gain in weight as the most important aspect of her baby's progress. It is important, but not the only gauge of the healthy child.

Lack of discrimination contributes towards failure to convince, and we shall continue to fail unless we put fairly before every mother the disadvantages, as well as the advantages, of any choice of action. This principle applies to all education in matters of health. We cannot *order* people, "Do this" or "Do that", except in occasional moments of crisis when they

come seeking our guidance over some specific illness or accident. "Doctor's orders" are emergency measures, not education. To help people to acquire "the art of the utilisation of knowledge" we must put all sides of the question before them, so that they can come to their own decision, and then help them in every possible way to act upon that decision.

In America a simple experiment[25] was carried out to measure the effectiveness of two different methods of approach to the same educational problem. Mothers leaving a maternity hospital with their newly-born babies were to be instructed about giving cod liver oil and orange juice. One half of the mothers leaving on a certain day were given direct instructions by the sister or doctor on duty. The other half were formed into a group where the whole question was discussed with the guidance of a member of the staff, whose attitude was "This is what your baby needs; this is what cod liver oil and orange juice do. What are you going to do about it?" Having discussed the matter thoroughly, the mothers decided to give the babies the cod liver oil and orange juice, and then dispersed to their various homes.

Four weeks later, a check-up was made to see how many mothers were still giving the cod liver oil and orange juice. Of those who received individual instruction, 55 per cent were still giving the cod liver oil and orange juice, as compared with 88 per cent of those who had discussed the matter in a group and come to their own decision.

We have for long confused instruction with education. The people who teach in homes and clinics and consulting-rooms have themselves been taught during their student days. Lacking any specialised training as teachers, they are inclined to use the methods that are familiar to them from their own experience: didactic teaching, demonstration, and advice. These worked well with them, and they are disheartened when they find such methods less successful with the mothers. They forget one great difference. Interest and the desire to learn were present in every doctor and nurse during their learning years, but are not necessarily present in every mother who comes to the antenatal or welfare clinic. For successful education the passive attitude must be changed to the active interest which enables people not only "to know what they do not know" but also "to behave as they do not behave."

What experiences or influences can change a person's attitude? A questionnaire survey carried out in America[26] throws some light on this. People were asked if their attitude to the Negro had ever changed—and, if so, what had changed it.

Several reasons were given, the most frequent being that the change in attitude had occurred when the person moved into a new group with different standards of behaviour. He then accepted the standards and

values of the new group to which he now belonged, and his attitude to the Negro changed accordingly.

When the antenatal mother enters a group where the value of breast feeding is unquestioningly taken for granted, she unconsciously adopts the attitude of the group to which she now belongs. The energies of the health team can then be directed, not to exhortation, but to making sure that it will be practically possible for the mother to breast feed her child. In one such clinic[27] in a series of 100 cases treated antenatally, 87 per cent were still breast feeding at the end of three months and 83 per cent at the end of six months.

A side issue, but an important one, of the antenatal preparation of the breast is the easing of doubt in the mother's mind as to whether she will be able to produce milk for her baby. The expression of the milk in the latter months of pregnancy helps to convince the mother that she already has the wherewithal to feed her baby when the time comes. The inhibitory effect of anxiety on the flow of breast milk has been noted by other observers.[28] Anything which will allay that anxiety is conducive to successful breast feeding later on, as, for example, the less rigorous time schedule now advocated under the title of "self demand feeding".

To follow one's instincts with official blessing is a tremendous preventive of anxiety and neurosis (as was found during the war, when it was the "right thing to do" to run for shelter when the siren sounded). Once mothers understand that it is "all right" to feed their babies when they both feel like it there will be far fewer tense, over-anxious mothers who want to feed their babies but somehow cannot manage to do so. This relief from anxiety, and the more frequent stimulus by that prime galactagogue, the sucking of the child, may do much to make the establishment of breast feeding more successful.

But to return to the effect of the group on the attitude of the learner. In communities such as are found in Africa, India or the Far East, and in certain villages in this country where breast feeding is the custom, little instruction in the "technique" of breast feeding is necessary. It seems that "attitude" is more important than "aptitude", and social approval one of the strongest factors in ensuring success.

In the less natural conditions of an industrial society more help is needed in the proper establishment of lactation, and time spent in preparation of the breast, and supervision of the early stages of lactation, is well rewarded. And, indeed, aptitude breeds success and helps to alter attitude, as Dr. Naish points out—"success depends on continual supervision and on the encouraging attitude of those in attendance; and success breeds success through the altered expectations of the mothers in the district".[28]

We cannot compel mothers to join different communities or groups

with different standards. But we can create groups and make sure that each time a mother, of her own free will, joins a "relaxation class" of a Mothers' Club, or a frankly educational antenatal class, she becomes part of a group whose standards she will ultimately adopt, with a consequent change of attitude and behaviour.

The other factor which was found to be a frequent cause of a change of attitude was the influence of someone with prestige. There is no doubt that here the general practitioner is of outstanding importance. His prestige is high among his patients and his advice, or lack of it, will often swing the undecided. But at present his influence apparently operates rather more against, than for, the encouragement of breast feeding. In the light of the accumulating evidence one wonders why.

One obvious reason is lack of time. With crowded surgeries and long lists of visits the overworked practitioner cannot devote the time to sit down and discuss different methods of infant feeding with each antenatal patient. Nor does the patient look to her medical adviser for such apparently indecisive action. Tradition and experience lead her to expect definite advice on what she should do, and tradition and training encourage the family doctor to give such authoritative advice as clearly and concisely as possible.

But there are other members of the "life saving team" whose tradition and training has prepared them, not for curative treatment, but for the more time-consuming job of education.

Where the general practitioner or the specialist, and the trained educators, the health visitor or midwife, work together, each contributing their own special skills, these difficulties have been overcome, to the benefit of all concerned.[28,29,30,31]

Conclusion

Do these scattered fragments of knowledge fit together and add a little to the whole picture? Other workers have attempted to survey the evidence before now. One American review[3a] concludes—"We have no evidence to favour the current belief among some paediatricians that breast feeding is inevitably more advantageous to the child than artificial feeding." It is probably true that under *ideal conditions* of child care there is little to choose between natural and artificial feeding, as far as the child is concerned. But life for the majority is not lived under ideal, or even good, conditions, and it is essential that we use every means in our power to safeguard the physical and mental health of the child born into the hazardous environment of the average home. In breast feeding it appears that we have one simple and inexpensive way of doing so.

The conclusions we are seeking to establish are as follows:

(1) That there is sufficient evidence on the value of breast feeding to

justify a serious effort to encourage a more general adoption of this method of infant feeding.

(2) That the attitude of the mother towards breast feeding is of prime importance in deciding her success or failure in this method.

(3) That it is worth studying the factors which influence people to change their attitude, and therefore their behaviour, and using such knowledge in our educational efforts.

Recommendations

It is suggested that successful breast feeding would be greatly encouraged by the building up of "groups" where breast feeding is valued highly, and where mothers would have the opportunity to learn, and to discuss freely, all aspects of the problem of infant feeding and care.

Instructional groups where a talk, or worse still a lecture, is given and the learners then exhorted to ask questions, do not stimulate true "discussion", though it is often presumed that they do. What is suggested is a group which is at ease with its members and its leader, and where the attitude of the leader is truly educative, drawing out the difficulties and ideas of the learners and leading them gently to their own decision, and where the resonance of conviction dispels the dissonance of doubt in the minds of both leader and learner.

Such groups as training for childbirth or relaxation classes, mothers' (or better still parents') clubs, antenatal educational clubs (as distinct from antenatal *clinics*) are all possible ways of creating the friendly atmosphere in which spontaneous discussion can take place, and explanations and knowledge be freely exchanged.

This educational work must go hand in hand with skilled preparation of the breasts and continuity of supervision for the nursing couple by midwife or doctor, until lactation is established.

Where it is realised that education, and not medical supervision, is the aim of a training for childbirth class, or an antenatal club, the general practitioner cannot feel that his province is being invaded or his authority undermined.

But he cannot be expected to encourage his patients to be taught by people of whom he has no personal knowledge. It is, we believe, quite as important for the Medical Officer of Health, through his staff, to acquaint the family doctor *personally* with the facilities available for the education of his antenatal patients as it is for the health visitor to visit the patient herself. Where personal contact has been established between the preventive and the curative teams, difficulties hitherto apparently insurmountable have a habit of dissolving away.

In the same way this courtesy, exchanged between hospital specialist and the health visitor responsible for the after-care of the mother and

baby, would do much to preserve that continuity of care which is essential to successful breast feeding. The hospital also has immense prestige. Anyone introduced to the patient by "Sister" as a fit and proper person to continue to ook after herself and her baby on her discharge from hospital will be accepted with confidence, and the change-over from hospital to home accomplished with lessened strain to the mother. Lack of this continuity of care is often disastrous to the maintenance of breast feeding, not yet fully established in these days of early discharge from hospital.

This may mean at first an extra demand on the already fully occupied time of the health visitor or midwife, but it would be a more rewarding expenditure of energy than much of that at present devoted to antenatal teaching. Only too often such efforts are defeated by contrary advice from the family doctor, or by lack of continuity in after-care.

Only when this gap between hospital, local authority and family doctor is bridged can further progress on the long road to "health for all" be accomplished, a road on which successful breast feeding is only the first step.

Summary

The reasons most commonly given by doctors and nurses when asked "Why don't mothers breast feed their babies ?" are compared with the relevant factual knowledge available. It appears that most of the reasons are not confirmed by the known facts.

It is suggested that more effective education would help mothers to acquire, and use, the necessary knowledge.

Experiences which have been found useful in changing attitude, and therefore behaviour, and in helping mothers to act upon acquired knowledge, are described.

The value of groups such as "Mothers' Clubs" or "Relaxation Classes", where the desire to breast feed is taken for granted by the leaders, and where mothers can *discuss freely* all aspects of infant feeding, is urged.

The supporting value of supervision of the mother's health, skilled preparation of the breasts for lactation and continuity of care for the nursing couple is also stressed.

Some ways by which the necessary co-operation between family doctor, midwife, hospital and welfare centre might be facilitated, are suggested.

References

1 *The Aims of Education*, by A. N. Whitehead. Williams & Norgate, Ltd., London, 1950.

2 Carr, E. H. "The New Society; The Historical Approach". *The Listener*, 1951 May 10th, XLV, 1158.

3 Vincent, Clark E. "Trends in Infant Care Ideas". *Child Development*, 1951 September, **22**, 3.

3a Ibid.

4 Douglas, J. W. B. "The Extent of Breast Feeding in Great Britain in 1946, with special reference to the Health and Survival of Children". *J. Obstet. and Gynaecol. Brit. Empire.* 1950 June, **57**, 3.

5 Robinson, Margaret. "Infant Morbidity and Mortality. A Study of 3,266 infants". *Lancet*, 1951 April 7th, **CCLX**, 6658.

5a Ibid.

6 Waller, H. "Incidence, Causes and Prevention of Failure of Breast Feeding". *British Medical Bulletin*, 1947, **5**, 2–3.

7 "Illness in Early Childhood in the Borough". Annual Report of the Medical Officer of Health, Borough of Luton. 1948.

7a Ibid.

8 *Maternity in Great Britain.* Oxford University Press, London, 1948.

9 *Report on Infant Deaths in Warrington in* 1949. Medical Officer of Health, County Borough of Warrington.

10 Ebbs, J. H., Tisdall, F. F., and Scott, W. A. "The influence of the pre-natal diet on the mother and child". *Journal of Nutrition*, **22**, 515, 1941.

11 Garry, R. C., and Stiven, D. "A Review of Recent Work on Dietary Requirements in Pregnancy and Lactation, with an attempt to assess Human Requirements". *Nutrition Abstracts and Reviews*, **5**, 855, 1936.

12 Burke, B. S. "The Need for Better Nutrition during Pregnancy and Lactation". *J. Am. Dietet. A.*, **17**, 102, 1941.

13 Toverud, K. V. "Nutritional Problems during Pregnancy and Lactation". *Hospitalsted* 77, 1 P. 1934. Abstracted in *Nutrition Abstracts and Reviews*, **4**, 614, 1934.

14 Kon, S. K., and Mawson, E. H. *Human Milk. Wartime Studies of Certain Vitamins and Other Constituents.* Medical Research Council Special Report Series No. 269. H.M.S.O., 1950.

15 Walker, A. R. P., Arvidsson, Ulla B., and Draper, W. L. "Breast Feeding and Diet". *Lancet*, 1952 February 9th, **CCLXII**, 6702.

16 Dykes, R. M. "Breast Feeding and Social Circumstances". *Public Health*, 1949 March, **LXII**, 6.

17 Grulee, C. G., Sanford, H. N., and Schwartz, H. "Toronto Survey". *Journal of the American Medical Association*, 1935, **104**, 1986.

19 Naish, F. Charlotte. 1949. *Lancet*, **1**, 146.

21 Douglas, J. W. B. "Health and Survival of Infants in Different Social Classes. A National Survey". *Lancet*, 1951 September 8th, **CCLXI**, 6680.

22 Grulee, C. G., and Sanford, H. N. (1936). "Influence of breast and artificial feeding on infantile eczema". *J. Pediat.*, **9**, 223.

23 Schlesinger, B. (Personal communication.)

24 Bowlby, J. *Maternal Care and Mental Health.* Bulletin of the World Health Organization, **3**, 3, 1951.

25 Wiseman, S. "Social Factors in Learning". *Health Education Journal*, 1949, **VII**, 2 and 3.

26 Watson, Jeanne. "Some Social and Psychological Situations Related to Change in Attitude". *Human Relations*, 1950, **III**, 1.

27 Waller, H. K. (1946). "Early failure of breast feeding; a clinical study of its causes and their prevention". *Arch. Dis. Childh.*, **21**, 1.

28 Naish, F. Charlotte. "Successful Breast Feeding". *British Medical Journal*, 1951 March 24th, No. 4707.

29 Greenwood Wilson, J. "Care and After-care". Monthly Bulletin of the Ministry of Health and the Medical Research Council, 1951 September, **10**.

30 Craig, W. S., Kitching, Gladys A., Davies, I. G., and Fraser Brockington, C. "Continued Nursing Care for the Small Infant Discharged from Hospital". *British Medical Journal*, 1951 June 2nd, No. 4717.

31 Watkins, A. G. "Report on the work of Health Visitors in a Children's Department in Hospital". *British Medical Journal*, 1951 May 12th, No. 4714.

NUTRITION COMMENTARY

ONE might borrow a phrase of Carlyle's and call this article "The Dietitian as Hero" ; for it is time, I think, that in the course of their training the young caterers and dietitians were given some hint of the brave part played by their profession. After all, most student nurses presumably hear about Florence Nightingale. Most medical students gain a passing familiarity with the names of William Harvey and John Hunter. But over the span of the last century at least two incidents have occurred that should be of interest to the student of human nutrition. The first was the departure of the London chef, Alexis Soyer, for the Crimea in 1855 ; the second was the work of our nutrition officers in the Japanese prison camps of Hong Kong and Singapore. It is with the latter that I am here most concerned ; and I wish chiefly to consider their report[1] in its educational rather than its medical aspect.

Soyer of the Crimea

Yet Soyer must not be ignored. As chef to the Reform Club, as wit and publicist and inventor, he was a well-known figure in the London of his day. He was also a man with a social conscience. He could not only produce startling confections for the tables of the wealthy ; he spent his time and ingenuity in organising good soup kitchens for the unemployed and the sufferers from the Irish famine ; and when the catering scandals of the Crimea came to his notice, the effect was as volcanic as were the medical and nursing scandals upon the mind of Miss Nightingale herself. How he reached the scene of war, how he set himself, single-handed, to reform the whole catering system, and how he died prematurely of a complaint contracted in the Crimea, can be learned from the biography published shortly before the recent war, *Portrait of a Chef*, by Helen Morris (Cambridge University Press, 1938).

The point is that this man appears to have combined within himself many of the qualities that properly belong to the good caterer and dietitian—an ability to improvise, artistry even with unpromising materials, a sense of organisation and a social feeling that made service to his fellow men the *motif* of his life. He is in many ways a more attractive figure than his great nursing contemporary ; and the two, it

[1] Smith, Dean A., and Woodruff, Michael F. A. *Deficiency Diseases in Japanese Prison Camps*. (M.R.C. Special Report Series No. 274.) H.M.S.O. 1951. Price 6s. 6d.

may be noted, had a deep respect for one another. Now that catering has become a recognised profession, Soyer's name should be preserved from the obscurity into which it has fallen.

How many lives he saved in the Crimea, it would be impossible to say. There seem to have been many cases of scurvy ; and if so, the healing of wounds and fractures was probably a tiresome business. What other dietary deficiencies were complicating the medical horrors of the campaign, we shall obviously never know ; for they would not have been recorded. Throughout history military campaigns, sea voyages and prisons have been the occasions for many outbreaks of deficiency diseases. We have to assume, I think, that at all times men have, when left to their own devices, managed to contrive a dietary pattern that was sufficiently varied to save them from malnutrition in the proper sense of the term. They often went hungry ; but they did not usually get scurvy, beriberi or xerophthalmia. It was when those who controlled the actions of men decided what food they were to be allowed to eat on campaign or in prison that "man's inhumanity to man" was evident ; and because human beings have no instinct to guide them in the choice of food, the sufferers from malnutrition went almost uncomplaining to their fate. At all events, they did not complain about the real cause of their misery.

The Prison Camps

Since the report on the Japanese prisons is written by the men who did the job, it is natural enough that we see little of them and learn too little of the methods they improvised. Yet it is the ingenuity and persistence of doctors and scientists, in meeting the inhumanity or carelessness of the prison authorities, that attract our attention. Nutritional deficiency diseases became very common in the camps. Often they assumed curious and perplexing forms. It was necessary to devise ways of preparing and cooking the foods so as to retain their vitamin content as far as possible; and frequently some effort had to be made to supplement the basic diet with some concentrated source of a vitamin, if it could be discovered: It was here that the slowly accumulated knowledge of the last thirty years found its testing time ; and it stood the test remarkably well.

Undoubtedly the medical men drew strength from the high morale of those about them, and in turn helped to maintain it. "Perhaps the brightest feature of life in the Singapore camps was the standard of morale. The initial reaction to captivity was one of depression and inactivity, but from 1942 onwards, despite the daily contact with disease, the lack of clothing, and the compulsory heavy work for inadequate rations, morale steadily mounted. The Japanese attempts to impose acceptance of a vaunted superiority produced the opposite result. Adversity stimulated the prisoners to surprising ingenuity in utilising the

wreckage of the war, and the work of the medical officers in combating deficiency disease was a vigorous example of such adaptation." Of the civilian camps in Hong Kong it is written that "cooking apparatus, equipment and utensils were absent, and no provision was made by the Japanese for large-scale cooking nor were any steps ever taken by them to rectify these deficiencies ; materials sent in by the local Red Cross organisation filled some of the gaps, but most of them were partially overcome by ingenious improvisation within the camp." Such was the scene ; and to add to it, "the fuel was exclusively wood, and the preparing of the mangrove logs was another serious labour problem, especially without proper tools. Tin baths, dustbins, and kerosene cans were the cooking and food serving containers."

Early in their career each of the camps set up a special organisation to deal with the probable deficiency diseases. These bodies had similar functions ; they had to take such steps as were possible to prepare against the outbreak of deficiency states and to standardise, if they could, the methods of combating them.

Prison Bill of Fare

Some insight into other methods that had to be adopted may be gained from the report. In the Hong Kong civilian camp the rice was usually steamed. It was washed as little as possible ; but much of it was very dirty "containing foreign materials ranging from dead rats to cigarette stubs and cockroach excreta, and had to be washed before cooking." Rice polishings and bran were utilised to the greatest extent as a precaution against beriberi ; and some was employed therapeutically when an outbreak occurred. Soya beans were occasionally included in the rations ; and they are, of course, a valuable source of protein and of certain vitamins. But "boiling was unsatisfactory" and caused digestive disturbances. "Pressure cookers were constructed in the camp, and twenty to thirty minutes cooking at 15 lbs. pressure produced beans soft enough to squash readily between finger and thumb." Bones were too useful a source of calcium to be neglected. "After pressure cookers were constructed all bones, meat and fish, and fish scales, fins and tails, were subjected to prolonged pressure cooking until they became of a putty-like consistency." This paste was usually sun-dried and used to thicken soups and stews.

It is interesting that the medical men adopted the primitive plan of preparing infusions of pine needles for their Vitamin C content. It was never done on a large scale ; but many individuals chopped young pine needles fine and boiled them in water ; the infusion was drunk as soon as it was cool enough. By these means and by the use made of all green stuff available outbreaks of scurvy were prevented.

The smallness of the salt ration was a serious matter for all the camps; and in spite of protests the Japanese refused to increase it. For men under a tropical sun the lack of salt was peculiarly dangerous. Efforts were made, to some extent successfully, to get salt from sea water; and in Hong Kong at least the practice seems to have persisted through the later part of the war.

In the Singapore civilian camp snails were utilised. The large edible snails that abounded were sprinked with salt to get rid of the slime, scalded in boiling water and then, after a thorough washing, curried or baked in snail pasties. "Prepared in this way they were palatable, and since each snail provided one ounce of edible meat they were obviously an excellent source of animal protein."

"Burning Feet"

Recourse was had from time to time to many other types of unusual food, such as rubber seeds as a source of one of the vitamins of the B complex. In spite of the efforts there were, of course, many outbreaks of complaints that were difficult to treat. Some of them had novel characteristics ; and it was not certain to what vitamin they would respond. Among these was the peculiar condition known as "burning feet". Cases appeared both in Hong Kong and Singapore from the late summer of 1942 onwards. There was a sensation in the feet like pins and needles, and an aching that demanded movement but was not relieved by it. All ages except the younger children were attacked more or less in even proportion. Undoubtedly the complaint had something to do with a lack of one or other of the vitamins of the B complex. There seems to have been some evidence that the seat of the trouble lay not in the feet themselves but in the nerves of the spine. The complaint was, however, peculiarly unpleasant and exhausting.

Romance of Catering

The purpose of this article is not to examine the theory of catering in prison camps (since we may devoutly hope there will be no more prison camps), but rather to make a contribution to the theory of health education. Soyer in the Crimea and the medical officers in the prison camps embodied, as it were, the food technology of their own times ; for Soyer knew much that was to be known in 1850 of the chemistry of food, and technically he was unsurpassed. When it came to the test, they all showed upon what reserves of patience, ingenuity and human compassion they could draw. The problem, it must be remembered, was not simply to make the diet adequate but to make it palatable ; and the cook and caterer must be trained to think in terms of the consumers with whom they will be concerned from time to time. A young woman,

who takes a course in dietetics or institutional management, is fitting herself for various careers—as a hospital caterer, in the school meals service, in industrial catering or in the world of commerce. Her job is to provide meals out of anything that is edible; and while she may never be faced with a serious testing time, she should know what the men of her craft have been able to achieve when that time did come at last.

Now that catering in all its aspects has become a profession (even if it was not one before), the course of training needs to acquire its cultural as well as its technical elements. One way of ensuring this is to introduce into the curriculum a few talks on the history of catering; and as all educationists know, history to be remembered by the student must possess its human and personal attributes; it must, in other words, have its "heroes". This is a tentative move towards a slight broadening of the curriculum in this cultural direction. Nutrition can become a very abstract subject when taught by those who do not see the plain necessity of keeping it on the human and domestic level; and if among its practitioners there are figures of interest and romance, so much the better for holding the attention of the student of seventeen or eighteen years of age.

FILM STRIPS

BREAST FEEDING (Parts 1, 2, and 3). Department of Child Health, Guy's Hospital Medical School. 1950. Black and white. 85 frames. 35 mm., double frame. Notes. Price 25s. the set (10s. each part) from Dr. Brian Stanford, 54, Upper Montagu Street, London, W.1.

Strip 1 covers the arguments in favour of breast feeding, breast anatomy and histology, and the physiology of milk production. Strip 2 deals with the composition of milk, the infant's needs, the management of breast feeding, ante-natal care and breast preparation. Strip 3 deals with success and failure, and the technique (mainly that of Dr. Waller) is described fully.

This is a clear, concise, up-to-date treatise on breast feeding. Aesthetically it is agreeable, and the diagrammatic and pictorial technique is of superior clarity. The strips should be very useful for nurses, midwives and doctors in training, or as material for refresher courses. They are not suitable for the general public. The notes are very brief, for the illustrations are largely self-explanatory. JOHN BURTON.

BOOK REVIEWS

THE HEALTH SERVICES. (George Allen & Unwin, Ltd., for the Institute of Public Administrators. 1951. Pp. 136. Price 10s. 6d.)

This book contains the papers given at a conference organised by the Institute of Public Administration to discuss some of the practical problems of the health services.

The conference was held at Church House, Westminster, in March, 1951, and was attended by 400 delegates from all branches of the health services, together with a number from important voluntary organisations.

The contributions are from representatives of different sections of the health services and range from a sane, balanced approach with outstanding contributions from the public health and social services, to blatant, hysterical voicing of meaningless slogans, looking back with rose-tinted glasses and nostalgia to the past. Nevertheless, the papers are generally well worth reading. The methods as well as the substance of the criticisms are in themselves an indication of how the new health scheme has succeeded in dividing and fragmenting the various branches of the health services, and in fostering vested interests. It is significant that little consideration is given in the discussion to the needs of the patient, to preventive medicine and to health education.

Although many of the contributions suggest rather tactfully that some of the difficulties are due to growing pains, all are agreed that many serious problems have arisen: problems of budgeting and finance; of extravagant and irresponsible spending; of indiscriminate prescribing; of the maze and muddle of the complicated administrative machine; of the overcrowding of hospital out-patients with increasing waiting lists; of the lack of accommodation for the chronic sick and aged and for convalescence; and of the restriction of the scope of work of the general practitioner. The solutions of these problems also range over a wide field from an increase in the number of committees to overcome the administrative muddle, to a reduction in the scope of the service to balance the budget, but the majority consider that health centres are essential to overcome many of the financial and administrative problems.

On reading this book one can only come to the inescapable conclusion which is reached by one or two contributors: that the health services will never run smoothly until we have a complete reform of the administrative machine and of local government.

S. LEFF.

CHEMOTHERAPY OF CANCER, The Inaugural Florence Blair Bell Lecture, by Sir Stanford Cade. (University Press of Liverpool. 1952. Pp. 31. Price 2s. 6d.)

On November 16th, 1950, Sir Stanford Cade gave the inaugural Florence Blair Bell Lecture. Sir Stanford has a reputation as a lecturer second to none, and it is, indeed, a pleasure even to read his address.

His idea of dividing Blair Bell's life into three phases is very appropriate. It was unfortunate, as the lecturer suggests, that the first phase of Blair Bell's work, the "calcium phase", with its research into the endocrines, was not prolonged. During the second, or "Lead phase", Blair Bell became so enthusiastic that he felt aggrieved if anyone suggested criticism or was unable to repeat his own results. As Sir Stanford remarks, "supreme interest can sometimes cloud accuracy".

A part of the lecture is devoted to a short review on Chemotherapy, and it gives sufficient information to suggest that not nearly enough research is being carried out on this very important aspect of cancer treatment. To increase it, however, may mean a change in the present organisation, if it can be said to exist, for cancer research in this country.

In the third or repetitive phase, mention is made of the interest and help

that Blair Bell gave to Fletcher Shaw in founding the Royal College of Obstetrics and Gynaecology. His name will be remembered in this connection long after his scientific work has been forgotten.

Sir Stanford says that as he wrote his address Blair Bell became to him "a real and living personality". To those who knew him this address will make him live again and it is difficult to describe the oration in any other term than absolutely brilliant.

YOUR HAY FEVER AND WHAT TO DO ABOUT IT, by Harry Swartz. (Funk & Wagnall, New York. 1951. Pp. 182. Price 21s. 6d., from Mayflower Publishing Co., Ltd., 17, Farringdon Street, E.C.4.)

This book is quite a mine of information on hay fever and allergy. It has chapters on "The History of Hay Fever", "What is Allergy?", "The Pollens and what they do", "Some facts and fancies about Hay Fever" and "Hay Fever and the public health", as well as chapters describing the symptoms, complications and treatment of hay fever.

It is written "for those millions throughout the world afflicted with hay fever", but, as its size and some of the chapter headings indicate, it is rather more than an elementary discourse to help hay fever sufferers. It is really quite comprehensive, supplying a lot of detailed information, yet lacking details of therapy which, quite rightly, should be reserved for medical text-books. The views expressed are those generally and widely accepted by those who have specialised in this subject.

It is, of course, an American book, and thus, of necessity, deals at some length with ragweed hay fever which, as the author indicates, does not occur in this country. It gives data, occupying some 16 pages, regarding the number of ragweed pollen grains caught during various years in different states and cities of the United States. Results of English pollen surveys are not included.

The reviewer, while admiring the enthusiasm of Dr. Swartz when he advocates mass education in allergy and hay fever ". . . by books, pamphlets, magazine articles in lay language; the radio, television, movie shorts and billboards, so important on the American landscapes . . ." feels that in this country the real need is to convince public health administrators of the necessity for clinics under expert direction where hay fever and other allergic conditions can be efficiently treated. In England and Wales hay fever affects one per cent of the population.

Few interested in hay fever will fail to find some information in the book which is of value and much that is of interest.

D. A. WILLIAMS.

HUMAN BLOOD GROUPS AND INHERITANCE, by Sylvia D. Lawler, and L. J. Lawler. (Wm. Heinemann, Ltd. 1951. Pp. viii+85. 6 figs. Price 3s. 6d.)

The publishers of the series in which this volume appears say that it is intended to cover "topics of the first importance, which are too specialised or developing too rapidly to be adequately dealt with in text-books". All this is true of the human blood groups. Interest is by no means confined to scientific workers, for blood transfusion, the general recognition of blood incompatibility as the cause of haemolytic disease of the new born and the fascinating variations in blood group proportions between race and race have all stimulated a desire for further knowledge amongst lay people.

This book can be most warmly recommended both to scientists and laymen. It is authoritative and up to date and deals with all aspects of the subject. The authors have achieved a remarkable degree of clarity in so small a space. Careful reading is necessary, but given this, the book should provide all those who are interested with an adequate bird's eye view of the whole field.

J. A. FRASER ROBERTS.

QUESTIONS CHILDREN ASK, by Len Chaloner. (Faber & Faber, Ltd. 1952. Pp. 97. Price 6s. 6d.)

The choice of title is misleading. Only two out of five chapters deal with children's questions, and then only with those that concern birth and death. No-one who has studied young children would discount the importance of our handling of these awakening interests, but to tear them thus from the rich and varied tapestry of the child's interest in its whole environment is to place a distorting emphasis upon them.

The author sets out to give her readers that "real understanding of the feeling and perplexities of childhood" which will enable them to deal with those questionings which have their roots in the developing emotional life. It is doubtful whether her translation of the Freudian theory of the growth of personality into an arch and colloquial prose will do anything of the kind. Nor does her use of single quotation marks add to the clarity of her thought. Why must we continually read 'bad', 'good', innocent', etc., and what particular meaning should one attach to an 'only' child ? Cross-references, and an astonishingly incomplete index do nothing to dispel the reader's confusion.

Binding and presentation are pleasing, as we expect from these publishers, but the book is not up to the standard of some that they have given us in this field.

I. GRAHAM STONE.

SEX, ITS MEANING AND PURPOSE, by W. E. Sargent. (Teach Yourself Books, English Universities Press. 1952. Pp. 154. Price 6s.)

Towards the end of this book we read, "We must try to see our sex life as part of the whole purpose and scheme of human life whose aim is to glorify God". The author is critical, however, of the orthodox Christian attitude to sex and marriage, attributing much blame to the influence of St. Paul, and drawing attention to the confusion between the legal, religious and ethical aspects of divorce. His purpose is to remove prejudice and to encourage an attitude which will be acceptable to the Christian ethic, if not to strict doctrine. Sexual physiology is therefore confined to a single chapter, and is encountered only after an explanation of the sex instinct and the need of the personality for its expression, which must be either through marriage or by sublimation. Sound marriage guidance is offered in the concluding chapters.

Many will be unable to accept the Freudian interpretation of behaviour. The inclusion of masturbation in a chapter on perversions invites criticism; and the answer given to the question of fundamental differences between the sexes is surely open to challenge. Nevertheless, the sincerity and shrewdness of this work, coupled with an unsophisticated style, make it very suitable for parents and youth leaders, and for the more intelligent adolescents under their care.

A. J. DALZELL-WARD.

HYGIENE, INFECTIOUS DISEASES AND DIETETICS, by Dennis H. Geffen and Susan Tracy. (Longmans Green. 1952. Pp. 276. Price 9s. 6d.)

This is a text-book written primarily for student nurses, but which has much useful material for social workers in the medical field. It is presented in three sections, the first containing chapters on personal health and environmental hygiene. While the emphasis is on general health, the authors have been careful to apply the principles to hospital practice. As nylon is coming into increasing use, some comments on it as a clothing material would be valuable.

The remaining sections on Infectious Diseases and Dietetics are concisely treated and contain much valuable material. The presentation makes the book easy and interesting to read. It is somewhat disappointing that the excellent illustrations in the hygiene section should not have been continued in the others. Diagrams of bacteria would be appreciated by the student nurse in her first introduction to this subject.

P. E. O'CONNELL.

"The Aims and Principles of the Social Services" is the title of one of the courses that will be held at a University Extension Summer School at Wye College, Ashford, Kent (16th-30th August, 1952). The following visiting lecturers have promised to speak on various aspects of the course, the main purpose of which will be to make a critical examination of the present pattern of the Social Services, with special attention to post-war legislation : Professor Richard Titmuss, Dr. Ffrangcon Roberts, David Hardman, F. J. Osborn, Dr. Agatha Bowley, Dr. Macalister Brew, John Marsh, Miss Dorothea Ramsay and Miss Rosalind Chambers. A prospectus may be obtained from the Department of Extra-Mural Studies (University Extension Courses), University of London, Senate House, W.C.1.

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